An epistemology of strategy formation in contemporary organisations

by

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For

my wife Lesley-Anne

who supports my never ending quest to understand things better and the quiet time it takes me to do this

and

my daughter Tayla Carmen

who, in the best traditions of 'The Alligator King', "picked me up when I was down"

You gave me the most precious gift of all - your love. With it, I have found that anything is possible

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DECLARATION

I declare that this thesis is my own unaided work and all intellectual property created by other people or organisations has been fully and accurately referenced. The thesis is submitted in fulfilment of the requirements for the degree of Doctor of Business Leadership at the University of South Africa. It has not been submitted before for any degree or examination at any other University.

Michael Patrick Shaw

15th June 2006

ABSTRACT

The strategy and strategic management discipline is characterised by a high degree of fragmentation and theoretical pluralism. This situation has arisen for a number of reasons, three of which are relevant for this thesis:

- There is no common understanding of what constitutes strategy and how strategy comes into existence.
- The business environment has changed over the years and firms have responded with strategy, strategic frameworks and perspectives that are appropriate for the firm context at specific points in time. However, as a result of the specific and narrow nature of the firm contexts, these responses have not contributed to the development of an inclusive and integrated theory of strategy formation.
- Academics, researchers and practitioners have to contend with the absence of a cohesive theoretical foundation or framework that describes, explains and predicts the behaviour of firms and markets.

Through an iterative process of exploration, description, analysis and synthesis of the literature on strategy the thesis identifies two main streams of theory: the prescriptive environmentally focused theories of strategy, mainly effective in stable operating contexts, and the descriptive firm based views of strategy that are more effective in complex operating contexts. This led to the conclusion that the environment and firm contexts are the main drivers of strategy formation in organisations.

In order to make sense of this phenomenon, models of the structure of both the prescriptive environmentally focused and the firm based theories of strategy formation were built and the elements common to both streams were extracted from the theory and the models. The process of reviewing theory and building the models clearly showed that the primary premises of strategy are systems theory, cognitive theory and learning and knowledge codification. Economic theory, evolutionary theory, complexity and chaos theory, institutional theory and other theory that has contributed to the development of the strategy discipline is embedded in the three primary premises.

This provided a foundation for the development of an integrating model of strategy formation in organisations that is premised on systems theory with the cognitive process as the core process of strategy formation. As such, existing environmental and firm based theories of strategy formation provide, categorise and structure data that informs the cognitive process lying at the core of the strategy formation process. Therefore the processes that are central to the prescriptive environmental theories and the descriptive firm based theories lie outside the core process of strategy formation.

Of particular relevance to the outcomes and conclusions of the thesis is that learning and knowledge codification is continuous, at both individual and organisational levels, throughout the core process and all other processes. Given the learning opportunities inherent in a properly applied scenario thinking and planning process the thesis concluded that scenario thinking and planning is potentially one of the most important methods or tools that can be used in strategy formation. Specifically, the process of developing scenarios leads to strategic conversation, individual and group learning, convergence of various individual perspectives, and building consensus among individuals in the organisation.

Key Terms:

Integration of Strategy Theory; Environmental Views of Strategy; Firm Based Views of Strategy; Prescriptive Perspectives of Strategy; Descriptive Perspectives of Strategy; Systems Theory; Individual Cognition; Organisational Cognition; Learning and Knowledge Codification; Scenario Thinking; Scenario Planning.

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DEFINITIONS and NOTES

1. ***Modernism*** is a philosophical concept defined as "*something typical of contemporary life or thought*" (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). The ontological position of Modernism is based on a belief in an objective external reality whose existence is independent of our knowledge of it, and this ontology leads to an epistemology of Positivism which means that we discover Truth through valid conceptualisation and reliable measurement that allows us to test knowledge against an objective world.
2. ***Postmodernism*** is a counter-movement to Modernism and is "*a rejection of all the hitherto accepted certainties that underpin modern style and content*" (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). In contrast to Modernists, Postmodernists believes that the world appears through language and is situated in discourse. In other words, reality exists only insofar as we attach meaning (through language and discourse) to phenomena. As such, epistemologically, knowledge cannot be an accurate account of Truth because meanings cannot be fixed; there is no independent reality; there are no facts only interpretations; and knowledge confers power.
3. ***Symbolic Interpretivism***. Somewhere between the Modernist and Postmodernist positions there is a version of the Truth that is becoming more widely accepted and merits inclusion in strategy formation theory. The philosophy of Symbolic Interpretivism (Hatch and Cunliffe, 2006) takes a subjectivist ontological position and draws on interpretivist epistemology. In essence, this philosophy suggests that we cannot know an external or objective existence apart from our subjective awareness of it – that which exists is that which we agree exists. For Symbolic Interpretivists, all knowledge is relative to the knower and can only be understood from the point of view of the individuals who are directly involved; Truth is socially constructed via multiple interpretations of the object of knowledge and therefore shifts and changes over time.
4. ***Strategy*** is defined as "*The art or science of the planning and conduct of a war*", or "*a particular long term plan for success, esp. in politics, business etc.*" (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). While this definition is useful in certain circumstances, and has been used in this thesis in

such circumstances, it does not reflect the fact that much strategy is emergent in nature and arises out of processes that have very little to do with planning. For the purposes of this thesis strategy has been defined as the art and science of achieving existing and emerging objectives during the course of a business cycle, and can be seen as a pattern in a stream of decisions and actions that are taken by individuals and organisations.

5. ***Strategic Management***: 'Strategic' is defined as *"of or characteristic of strategy"* or *"important to strategy"*, and 'Management' is defined as *"the technique, practice, or science of managing or controlling"*. (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). This definition has its roots in Taylor's (1947) principles of scientific management and, while relevant in certain circumstances, is not universally applicable. The term management in this thesis therefore also includes the art of management and the facilitation of outcomes that are desirable to the firm.
6. ***Plan***: A Plan is a *"detailed scheme, method, etc., for attaining an objective"*, or *"a proposed, usually tentative idea for doing something"*. (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.).
7. ***Formation (as in 'Strategy Formation')***: Formation is defined as *"the act of taking form or existence"; "something that is formed"* (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). In effect, strategy takes form at the point of decision where a specific strategy is adopted for implementation. The strategy may arise out of the prescriptive schools of strategy formation or it may arise from an emergent process. As such, 'formation' implies an 'all inclusive' perspective of the processes and development of content leading up to the decision to adopt a specific strategy.
8. ***Formulation (as in 'Strategy Formulation')***: Formulation is defined as *"to put into or express in systematic terms; express in or as if in a formula"* (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). In this thesis the use of the term 'formulation' has been restricted to the processes adopted by the prescriptive schools of strategy where normative models of strategy formation are applied. This is a narrower perspective on strategy and excludes emergent strategy that arises out of the individual and organisational responses to chaos and complexity.

9. ***Cognition*** is defined as *"the mental act or process by which knowledge is acquired, including perception, intuition and reasoning"* (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). The process by which knowledge is acquired is commonly known as learning and the concepts of knowledge acquisition and learning are seen as 'two sides of the same coin' for the purposes of this thesis.
10. ***Rational*** is defined as *"using reason or logic in thinking out a problem .... in accordance with the principles of logic or reason; reasonable"*. (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.). An assumption of the rationality of actors in an economic system is central to the principles of neo economic theory, and this assumption is also fundamental to the environmental, rational or prescriptive views of strategy. However, the firm based views of strategy are primarily rooted in evolutionary economics and do not always assume that actors in the economic system are rational.
11. ***Economics*** is the *"social science concerned with the production and consumption of goods and services and the analysis of the commercial activities of a society"*. (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.).
12. ***Pluralism*** is a term used in this thesis in the metaphysical sense *"that reality consists of independent entities rather than one unchanging whole"* (Collins Concise Dictionary Plus (1989). William Collins Sons & Co. Ltd., London.).
13. While being aware that writing a thesis generally requires a specific style of writing, sometimes referred to as an academic or scientific style, this thesis was written less formally to improve accessibility and readability, and reflect the subjective interpretivist nature of the thesis.

Chapter 1: ORIENTATION

Barca (2003), in his exploration of the economic foundations of strategic management, expressed the opinion that one of the *"enduring problems"* in strategic management is that researchers have to contend with a lack of theoretical foundations that describe, explain and predict the behaviour of firms and markets. In developing his argument Barca (2003: Preface) contends that most theory in strategic management is *"borrowed"* from other disciplines and, furthermore, a *"common critique of business strategy scholarship is that it offers little more than astute descriptions of researchers' observations of business phenomena"*.

Barca's comments are startling but must be seen in the context of the case that he presents for the utilisation of economic theory as a foundation for the development of strategic management theory. Barca is not alone in his views and approach, and many other writers, researchers and academics have advanced similar arguments for the use of philosophy, military strategy, psychology, sociology, political science, industrial economics, systems and evolutionary theory and organisational theory, amongst other disciplines, as a theoretical basis for the strategy discipline.

It is hard to disagree with Barca's assertions regarding the lack of theoretical foundations developed within strategic management since most theories ascribed to the strategy discipline draw on theory developed in other disciplines. Pettigrew, Thomas and Whittington (2002: p9) described this phenomenon as a *"multidisciplinary melting pot"*, and Bowman, Singh and Thomas (2002: p35) assert that it *"is quite clear that the strategy field's growth has reflected a tradition of theoretical pluralism in its borrowing of concepts and theories from other disciplines"*.

This multidisciplinary approach, extensively apparent in both the theoretical development of the strategy discipline and in its practical application, has led to a number of scholars describing strategy and strategic management theory as being highly fragmented. Foss (1996 - as quoted in Pettigrew, Thomas and Whittington, 2002: p14) suggests the strategy field is a *"fragmented adhocracy"*, *"a field which has become too pluralistic, idiosyncratic and uncoordinated"* – a view shared with Camerer (1985),

Mahoney (1993) and Elfring and Volberda (2001: p1) who argue that the field of strategic management is *"extremely fragmented"* and there is *"no agreement concerning the underlying theoretical dimensions"* of the discipline.

For the purposes of this thesis, and in order to make sense of the multidisciplinary plethora of perspectives, theories, frameworks and methods in the field of strategy, it is necessary to broadly categorise the perspectives, theories, frameworks and methods into two generally accepted views of strategy: environmental views and firm based views. The focus of the environmental views is external and concerned primarily with the market, industry and competitive environments and the political, social, economic and technology circumstances in which the firm operates. This can be contrasted with the firm based views where the focus is internal and concerned with firm resources, issues of firm structure and processes, innovation and knowledge, and competencies and dynamic capabilities.

This categorisation has considerable support in the strategy and strategic management literature and is probably one of the few aspects of strategy that enjoys broad based agreement. Porter (1980: p3), in his ground-breaking work titled 'Competitive Strategy', wrote that the *"essence of formulating competitive strategy is relating a company to its environment"*, and Kay (2000: p6) noted that all theories of strategy are concerned, in one way or another, with *"the match between the internal capabilities of the company and its external environment"*.

The perspective that the strategy discipline has both an internal orientation and an external orientation (captured in the environmental and firm based views of strategy) provides a good departure point for a 'context setting' overview of strategy. The development trajectory of the strategy discipline follows two incremental streams of thought. The first stream, known for its rationalist or environmental view of strategy, has its primary focus on the external environment and 'sees' strategy as a process of configuring the organisation to meet the requirements of this external environment. This stream has its roots in military applications and the structure-conduct-performance paradigm of industrial economics, and emphasises how market structure is the primary influencer of organisational behaviour (Kay, 2000).

Up until the end of World War 2 the 'command and control' model of strategy was prevalent, the worker was not considered as a source of competitive advantage and, because of limited choice, customers tended to buy what was available and not what they wanted. Strategy, at this time, was about winning the war by eliminating competition (Oliver, 2001). However, according to Oliver (2001: p8), World War 2 *"demonstrated that the winner was the one with the better industrial machine"* and this precipitated a move from the metaphor of *"strategy as war"* to *"strategy as machine"*. Oliver (2001) goes on to state that *"the war metaphor gave way to a view of strategy as essentially an industrial process that, just like a factory, was largely mechanised. The prescribed approaches to strategy seemed to suggest (just as with a machine) that if you press this button or pull this lever then such and such will happen."*

This led to the idea that strategy in an industrial context could be seen as a process that, like other business processes, was manageable, and in the late 1950's literature on industrial / business strategy started to appear. Between 1960 and 1985 this body of literature evolved into three broad perspectives on strategy formation which Mintzberg, Ahlstrand and Lampel (1998) labelled the design, the planning and the positioning perspectives on strategy formation. These three perspectives of strategy formation formed the core of what became known as the rationalist or environmental view of strategy.

The origins of the design perspective can be traced back to Selznick (1957) who debated the need to bring together the organisations' *"internal state"* with its *"external expectations"* and Chandler (1962) who established the design perspectives' notion of the relationship between strategy and structure. However, it was probably Andrews (1971 and 1980) who, in 1965 with the General Management Group at the Harvard Business School, established this perspective as one of the most influential views of the strategy formation process with his introduction of the ubiquitous SWOT Analysis.

At the same time as the design perspective on strategy was rising to prominence, Ansoff (1965) introduced the concept of strategy as a process of planning – a concept that dominated the practice of strategy in organisations and initiated the publication of

thousands of books and articles on strategy during the 1970's. The design and planning perspectives are complementary in that the design school is orientated towards strategy conceptualisation and the planning schools' orientation is a planning process that incorporates both conceptualisation (rooted in the design school) and implementation.

The design and planning schools were supplemented by a considerable body of empirical research and publication emanating from consulting firms that sought to position themselves in the market by the addition of unique perspectives on strategy formation. The most notable of these was the Boston Consulting Group who, through its founder Bruce Henderson, gave the world the growth-share matrix and the experience curve during the latter half of the 1970s'. However, probably the most significant contribution to the environmental or rationalist school came in 1980 with the publication of Porter's book "Competitive Strategy". Porter (1980 and 1985) drew on military and macro-economic theory in positing his theories of competitive positioning, the value chain, the effects of market and industry structure, and the generic strategies. Effectively, Porter's work provided the academic foundation for what came to be known as the positioning perspective of strategy formation in organisations.

During the global economic shocks of the 1970's and the increasing globalisation and rapid technology innovation of the 1980's, the rationalist or environmental school became less relevant as accelerating and discontinuous change brought huge complexity to the external / operating environment. This resulted in 'orthodox' rationalist strategy development, mainly because of the lack of relevance and an inability to facilitate organisational evolution, returning a dismal record of success. Oliver (2001: p8) summarised the situation as follows: *"The global shocks of the 1970's illustrated the importance of flexibility, non-linear thinking (i.e. strategy was not simply an extension of current trends), and rapid communication in strategic thinking. Many companies burdened with a rigid planning process (or no planning process at all) suffered devastating consequences at the hands of escalating oil prices, war, government instability, and increasing global competition".*

Oliver was not alone in identifying the complex change that was sweeping the world and the impact this change had on the formation of strategy in organisations. Mintzberg

(1985 and 1994) documented the *"Rise and Fall of Strategic Planning"* and identified the themes of *"deliberate"* and *"emergent"* strategy, and Kiechel (1984), in his article titled *"Sniping at Strategic Planning"*, pointed to a study that made the startling finding that only 10% of formulated or planned strategies were actually implemented. Pietersen (2002) noted that Kiechel's article suggests that 90% of realised strategy is strategy that emerges from *"ad-hoc initiatives, reactions, decisions and choices that managers make in response to daily pressures, without guidance from any overarching strategic concept"*.

This new context, which affected both the organisation and its external environment, led to the rise of a different perspective of strategy formation in organisations that saw the focus of strategy formation shift inward and the second stream of thought on strategy began its development. The second stream, encompassing resource-based and evolutionary theories of the organisation, focuses on the organisation and its dynamics as a means to creating opportunities, and / or responding to predictable and unpredictable change, in the external environment.

What is interesting in the development of the second stream of thought is that it also has an economic base, drawing on the Ricardian approach to the determination of economic rent (Kay, 2000), and the first seeds of this stream were sown in 1959 by Penrose – at the same time as the rationalist view was gaining momentum as the dominant view of strategy. Penrose (1959) contribution to what came to be known as resource-based theory was not widely recognised until 1984 when Wernerfeldt published "A Resource-based View of the Firm". While there appears to be consensus among scholars of strategy that Wernerfeldt's article effectively precipitated the shift towards the resource based perspective of strategy formation in organisational practice, momentum for this shift started building in the late 1970's with the recognition that strategy formation is a political process (Pettigrew, 1987) and it involves an understanding of the dynamics of the organisation. This view was confirmed by Mintzberg (1978) and Miles and Snow (1978) who noted that strategy is not always rational and often emerges as a pattern in a stream of managerial decision making arising from psychological, sociological and political considerations.

Between 1980 and 2000 a number of prominent academics and practitioners built the second school of thought on strategy into the view of strategy formation in organisations that we see today. In 1980 Quinn (1980b) published a set of case studies that identified a step-by-step process of strategy that is evolutionary in nature and is characterised by organisational processes and routines that led to what Quinn called *"logical incrementalism"*. This shifted the focus of strategy formation from an external environmental emphasis to an internal firm-based emphasis. Different perspectives with a firm-based focus rapidly followed Quinn and Wernerfeldt's work, amongst them Barney (1991, 2001 and 2002) who structured the relationship between the Resource-based View and competitive advantage and developed the VRIO framework, and Grant (1991) whose article titled *"The Resource-based Theory of Competitive Advantage"* is still seen as a seminal work in the resource-based view of firms.

The firm based views of strategy were, to a significant degree, popularised by the work of Hamel and Prahalad (1989 and 1994) whose *"Strategic Intent"* and *"Core Competence"* approach to strategy sought to guide and integrate people, structure, processes and technology within the firm into a unique configuration that provided competitive advantage. The downside of Hamel and Prahalad's theory was that, in complex and quick-changing environments, core competencies could become 'core rigidities', and the ability to quickly reconfigure the organisation is essential to maintain competitive advantage. This led to the work of Teece, Pisano and Shuen (1997) who, in building on the resource-based and competency based views of the firm, introduced the concept of *"Dynamic Capabilities"*. In essence, this approach emphasised the need for a capacity that facilitated the rapid reconfiguration of resources and competencies to maintain competitive advantage under conditions of complexity and rapid change.

Since 1998 the strategy discipline seems to have gone through a period of consolidation. Much of the significant work done over the seven years to 2005 has involved variations on established perspectives and efforts to resolve issues of fragmentation and contradiction. However, since the turn of the century, a number of academics and practitioners have turned to other disciplines such as psychology, learning theories, politics, sociology, systems and complexity theory, and decision theory to provide a foundation on which to build effective and coherent strategy theory. It is the belief of

many people that the evolution of the strategy discipline will come about through the exploration and synthesis of current theory and these disciplines.

In summary, the first stream of thought sees the external environment as the driver of strategy and adopts a rationalist, linear and mechanistic approach to strategy formation. This approach was developed when the external environment was stable and lent itself to predictability and control as a source of competitive advantage. In contrast, the second stream of thought sees the organisation as the driver of strategy and adopts an evolutionary and emergent approach to strategy formation. The second stream came to prominence when rising complexity in the external environment revealed the shortcomings of 'orthodox' rationalist strategy. What is clear is that the two streams are presented in practice as fundamentally different in a number of ways and, generally, organisations tend to adopt either the first or the second stream of thought. Similarly, scholarly discourse and literature seems to follow the themes of either one or the other view – it is seldom that both streams are addressed as parts of a single greater body of knowledge or discipline.

1.1 The Problem Statement

The disciplinary fragmentation and theoretical pluralism that characterises the strategy discipline (Barca (2003), Elfring and Volberda (2001), Mahoney (1993) Camerer (1985), Foss (1996) and Pettigrew, Thomas and Whittington (2002) amongst others) points to an urgent need for synthesis of the theoretical and methodological foundations of the strategy discipline. This need is reinforced by the frequent appearance of new and narrow perspectives on strategy, usually drawn from other disciplines, which further fragment the strategy discipline, and has led to many attempts by a number of scholars over the past fifteen years to develop a theory, a methodology or a framework that makes sense of the plethora of perspectives that define strategy.

Kay (2000 and 2003), while acknowledging and commenting on the various perspectives and views, has observed that certain views of strategy enjoy broader support in academia and practice than others. This, it is implied, lends itself to the notion that certain theories of strategy are core to the discipline while others simply

enhance these core views and add to the overall understanding of strategy. While this approach provides a rudimentary integrative framework it is highly subjective and less than satisfactory and, ultimately, leads to more questions than answers.

According to Kay (2000: p7), *"The currently dominant view of strategy"* is *"resource based theory"* – a theory that is central to the second stream of thought on strategy. Implicit in this statement is the suggestion that there are differences that set the two streams apart leading one to 'dominate' the other, and promoting the idea that the two streams are in 'competition'. This suggests that 'subscription' to the principles of one of the streams would lead to exclusion of the other – a view that is prevalent in practice but does not reflect a full appreciation of the concepts and mechanics of strategy formation that underlie the two streams. This situation has been exacerbated by the paucity of literature and practice around, firstly, the importance of context in determining which view of strategy should be used in a particular situation and, secondly, the integration of the two streams.

de Wit and Meyer (1998 and 2004) take a different stance to Kay and, in an attempt to *"challenge orthodoxy"*, present strategy as a series of paradoxes that are *"A broad representation of differing, and often conflicting, perspectives and theories reflecting the richness of current debate among academics and practitioners in the field of strategic management."* This thinking led de Wit and Meyer (1998) to identify eleven paradoxes across the various dimensions of the two streams of strategic thought. Contrast de Wit and Meyer's attempts at developing an integrated approach to strategy with Mintzberg (1994 and 1998) who, in his earlier writings, offers five perspectives on strategy, and in his book titled *"Strategy Safari"* (Mintzberg, Ahlstrand and Lampel, 1998) offers 10 schools, 3 of which are considered prescriptive, 6 descriptive, and a final school which seeks, less than successfully, to integrate all 9 schools into a single body of thought on strategy formation. It is clear from contrasting the work of de Wit and Meyer with the work of Mintzberg that there are two new frameworks for understanding strategy rather than a synthesis of the two streams of thinking on strategy.

Other writers have also sought to draw the various perspectives, theories, frameworks , themes and methods in the field of strategy formation together, amongst them Shay and

Rothaermel (1999), Elfring and Volberda (2001) and Schoemaker (2001), but the results of these efforts have also been less than satisfactory. A preliminary review of the literature (set out in section 2: The Literature Review below) indicates that the reason an integrated theory of strategy formation has not yet emerged is that most attempts at integrating the disparate strands of strategy formation have fallen short in one critical respect: they have not identified the elements common to both schools and all perspectives of strategy formation. This thesis seeks to address this shortcoming by seeking answers to the 5 research questions set out in section *1.2: The Research Questions* below.

1.2 The Research Questions

1. Can most significant perspectives, theories and methods of strategy formation be broadly categorised into an external (rationalist or environmental) and internal perspective (the firm based view)?
2. How does context, both internal and external to the organisation, influence the process and content aspects of strategy formation?
3. If context is a determinant of strategy formation, what is the mechanism by which context drives strategy and how can it best be described?
4. What is the relationship between the rationalist or environmental theories and the firm based perspectives on strategy formation?
5. Do the answers to the above questions provide an academic and empirical foundation for the development of an inclusive and integrating theory of strategy formation and, if so, what form does an inclusive and integrating theory of strategy formation take?

1.3 The Purpose of the Study

The objectives of this doctoral thesis are twofold:

1. Document a detailed study of the various perspectives on strategy formation in organisations with specific reference to the context in which strategy formation is enacted, the process or processes that govern strategy formation, and the content that manifests as a result of the context and processes.

2. Develop an inclusive and integrating theory of strategy formation in organisations that acknowledges context and incorporates both internal (the organisation) and external (the organisations operating environment) perspectives on strategy.

1.4 The Scope of the Study

The thesis is bounded by the research questions and purpose and reflects the nature of the research being conducted. As such, the focus of this research is on building an inclusive and integrating theory of strategy formation in organisations that draws on existing perspectives, theories, sources of information and analysis. This approach reflects the intention of the research which is to pull together the various and disparate perspectives and schools of strategic thinking into a coherent whole that will facilitate further empirical research – some of which will test the robustness of the findings of this study.

The research has therefore been confined to an intensive and extensive review of existing literature, both academic and popular, the result of which has been applied to the development of theory. This necessitated a two phased approach to this thesis: the first being exploratory and descriptive in nature and the second both analytical and synthetic. This approach is dealt with in considerable detail in *Chapter 2: The Research Design and Methodology.*

1.5 The Significance of the Study

The traditional approaches to strategy formation, based on the acquisition and analysis of historic and current data and trends which are used to project the future state of markets and operating conditions, are insufficient in a world of rapid and discontinuous change. Recognition of this situation led to the development of the firm based views of strategy as a means to managing the discontinuous change and complexity that characterised the global environment from the 1970's. However, the world is both simple and predictable and complex and evolutionary simultaneously, and the current approaches to strategy formation, outlined in the introduction above, do not always acknowledge or accommodate this fact.

The biggest problem facing many organisations is an inability of leaders and managers to recognise an operating context and the demands associated with the operating context and, as a result, leaders and managers are unable to form appropriate and effective strategy. A substantial reason could be that strategy is, according to Mintzberg *et al* (1998), a substantial subject and loosely defined, and the ability to identify an operating context, select appropriate theories and apply those lies in the domain of educated specialists.

It was the intention of this thesis, and the associated research, to develop an inclusive and integrating theory of strategy formation based on common platforms and utilising common themes. Furthermore, it was also intended that this theory should have a practical foundation and be accessible to the leaders and managers that will apply it. This should ensure that the process of strategy formation and strategic decision making in organisations is relevant and focused. In applying the theory organisations will improve the efficiency of the strategy formation process and the effectiveness of strategy content and implementation, and will be better able to respond quickly and effectively to rapid and discontinuous change in their operating environments.

Perhaps the best argument supporting the significance of this study comes from Mintzberg et al (1998: p373) who, after providing an overview of all significant perspectives, theories and schools of thought on strategy formation, states *"We should certainly encourage scholars and consultants to continue probing the important elements of each school,"* we need to know more about the whole and the parts that make up the whole. *"But, more importantly, we need to get beyond the narrowness of each school"* and perspective, and get *"to know how this beast called strategy formation, which combines all these schools and more, really lives its life"*.

1.6 The Structure of this Thesis

The research conducted for this thesis focused on existing theory, and a preliminary literature review in the form of a reading program was conducted for setting the research context, formulating the research problem, defining the scope of the research and for

deciding on the methodology to be used. However, the literature review was not limited to setting a context in this thesis and it evolved from the reading program and constantly informed the process of analysis and synthesis and the development of theory (see *Chapter 2: The Research Design and Methodology*). As such the methodological approach was iterative and resulted in the research design and methodology being finalised before the second and subsequent iterations of the literature review began.

This approach was extremely useful in that the methodology provided specific and detailed guidelines and actions necessary for completion of the research and the write up of the thesis, and the chapter on research design and methodology (Chapter 2) therefore follows the introductory chapter. This chapter provides information on the research philosophy and strategies, justifies the research design and the choice of research methods and techniques, and gives a detailed description of the process of data acquisition as well as the process of analysis and synthesis.

The critical literature review, dealt with in Chapter 3, contains an extensive multi-disciplinary review of the existing scholarship on the formation of strategy in organisations. The literature review is organised by perspectives, themes and key constructs in the study and was specifically designed to iteratively inform, 'feed' and 'nurture' the exploratory, analytic and synthetic aspects of the research.

Following the critical literature review there was an iterative process of reflection, analysis and further research that surfaced concepts and themes common to both the environmental and firm based views of strategy formation. This was written up in Chapter 4 where the argument for an inclusive approach to strategy formation, based on a synthesis of the concepts and themes common to both the environmental and firm based views, was developed and refined.

Chapter 5 reflects and concludes on the themes that surfaced during the course of the research and draws the themes into an inclusive framework that presents the author's perspectives on the process of strategy formation in contemporary organisations. The five questions that this research sought to answer are then correlated with the findings of this thesis and an opinion advanced on the effectiveness of the outcomes produced by

this research effort. In conclusion, opportunities for additional research that surfaced during work on this thesis have been noted in the hope that this will provide some assistance to other academics interested in exploring the process of strategy formation in contemporary organisations.

Chapter 2: THE RESEARCH DESIGN AND METHODOLOGY

The research was premised on an iterative literature review that was both wide ranging and detailed. Each iteration of the review surfaced additional information and new avenues of exploration, and the outcomes provided the answers for the five research questions that were identified in the preliminary review. More importantly, this approach facilitated the development of an inclusive and integrating model of strategy that provides a new perspective on how strategy is formed in organisations.

This approach necessitated a departure from the modernist research tradition in that the ontology was subjective and based on the belief that we cannot know an external or objective existence apart from each individuals subjective awareness of it, and this resulted in an interpretivist research epistemology that takes the view that "*all knowledge is relative to the knower and can only be understood from the point of view of the individuals who are directly involved*". This research philosophy drew on the "*symbolic interpretivism*" perspective of organisational theory (Hatch and Cunliffe, 2006: p14).

The adoption of this philosophical stance meant that the research focused on describing how people give meaning and order to their experiences in different contexts "*through interpretive and symbolic acts, forms and processes*" (Hatch and Cunliffe, 2006: p14) and, as a result, the nature of the research had to be qualitative. Given that most research designs are based on modernist research perspectives, and qualitative research designs tend to be narrowly focused to ensure control of the research, it was necessary to develop a 'hybrid' research design that drew on the best features of two established research designs in order to meet the research objectives.

The design therefore incorporates two types of study identified by Mouton (2001: pp176–180): a literature review and a theory building study. This tied in with the two phases of the thesis: the first involved an extensive and intensive exploration of existing literature and the findings described and documented, and the second phase involved a detailed analysis and synthesis of the findings out of which an inclusive theory of strategy formation was built. Such studies, according to Mouton (2001), make use of

secondary data almost exclusively. As such, the research was a 'desktop study' using secondary data acquired from published literature, digital media, archives and databases, film and transcripts of conferences and forums, and the world-wide-web.

Another feature of the research was that academics and prominent business people were used as 'guides' - not to provide primary data, but to help identify and validate the inclusion of the concepts and theories that were studied. As such, they were limited to providing their opinion as to whether the inclusion or exclusion of a particular perspective, theory or method was valid and/or relevant or not. From the researcher's point of view this ensured that the researcher was not unduly influenced by the personal views of the 'guides' and did not start with any predetermined theories or conceptual frameworks. The selection of these 'guides was subjective and random and based purely on the researchers perspective that the 'guides' were knowledgeable in the subject being researched and were able to add value to the research process.

In developing the research design and methodology, the process in *Figure 1: Process for Developing the Research Design and Methodology* was followed:

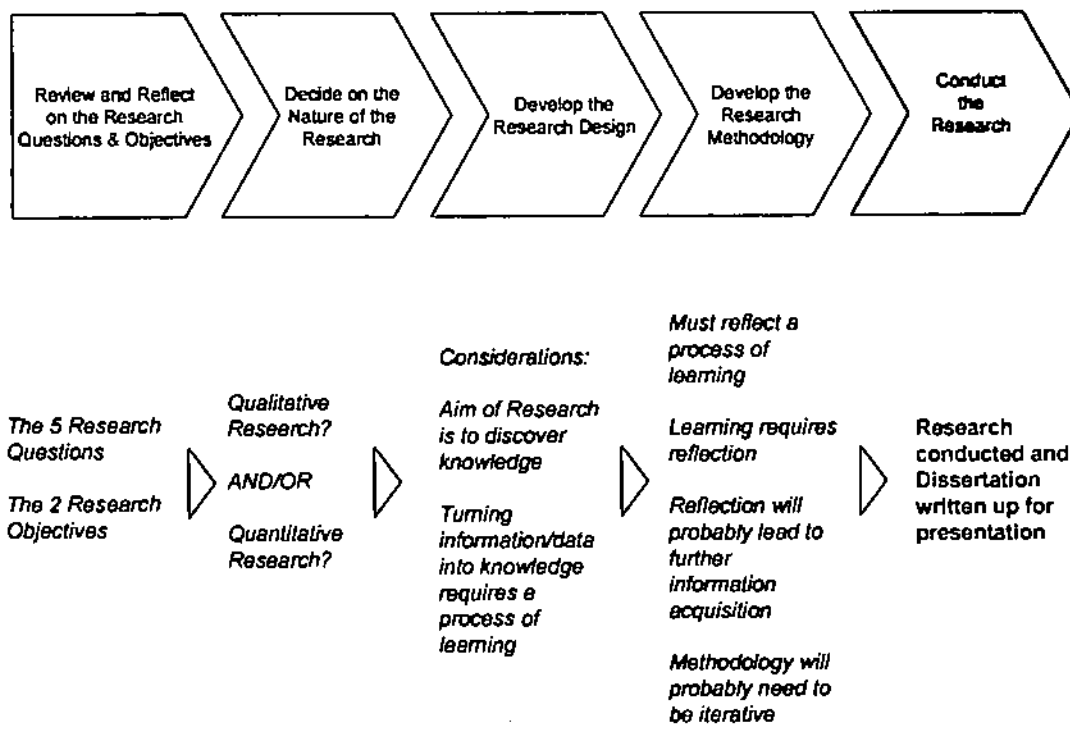


Figure 1: Process for Developing the Research Design and Methodology

2.1 A Qualitative Research Approach: The Rationale

According to Creswell (1994: pp1-2) a qualitative study *"is defined as an inquiry process of understanding a social or human problem based on building a complex, holistic picture, formed with words"* and *" reporting detailed views of informants"*. Mouton (2001: p148) provides another definition of qualitative research: *"Studies that are ... qualitative in nature ... provide an in-depth description of a group of people or community. Such descriptions are embedded in the life-worlds of the actors being studied and produce insider perspectives of the actors and their practices"*.

The research, in part, sought to identify, describe and evaluate the application of theory and practices of actors regarding strategy formation in the organisations to which they belong. Based on this a qualitative paradigm seemed most appropriate, but additional justification, premised on the nature and characteristics of the research, was sought.

The research drew on various disciplines and theories relating to context, process and content of strategy formation to develop an inclusive theory of strategy formation in organisations. This multi-disciplinary approach was unique in that most other studies of strategy formation have a narrower disciplinary focus. Because of this the structure and form of the inclusive theory was speculative and could not be defined at the start of the research. In addition, there were a number of unidentified perspectives that could have impacted the research content and the approach to developing a theory of strategy formation.

This meant that the research conducted for this thesis had to be exploratory, descriptive and explanatory. This view was confirmed by the experiences of the researcher who found it necessary to explore the meaning of a number of paradoxical concepts and, based on the perceptions of the researcher, describe and explain these meanings. This required the acquisition of qualitative data, an approach suggested by Dey's comment (in Saunders, Lewis and Thornhill, 2003: p378) that the more *"ambiguous and elastic"* the concepts being considered, the less possible it is to quantify data in a meaningful way. Saunders *et al* (2003) expand on Dey's comment in stating that qualitative data are

associated with ambiguous and elastic concepts that are characterised by their richness and fullness of meaning.

Another aspect of the qualitative paradigm was the use of a combination of inductive and deductive reasoning for synthesis, analysis and drawing conclusions. This was found to be very effective in facilitating the emergence of patterns, themes and theories and allowing for the drawing of inferences from the critical literature review. Given the above, the application of a qualitative research approach, focused on exploring the situation, was considered most appropriate.

2.2 The Research Design

The research documents a detailed study of the various perspectives on strategy formation in organisations with specific reference to the context in which strategy formation is enacted, the process or processes that govern strategy formation and the content that manifests as a result of the context and processes. The documented and detailed study was then used to develop an inclusive and integrating theory of strategy formation in organisations.

The process of documenting the study (the review of the literature) was non-empirical, exploratory and utilised a qualitative method of data collection and analysis. In accordance with the views of Saunders, Lewis and Thornhill (2003: p47), this process was not considered complete until

- all the relevant and key theories and perspectives on strategy formation had been included in the study,
- it could be demonstrated that the study reflected the latest thinking,
- it was possible to assess the strengths and weaknesses of previous work, including omission and bias, and account for the assessment in the arguments contained in the thesis.

On completion of each of the iterations of the literature review a process of analysis and synthesis took place, and the theories, perspectives, themes and trends that emerged from the review of the literature were used to develop and build an inclusive and integrating theory of strategy formation in organisations.

In order to facilitate an efficient research process the research was divided into two distinct phases. The first phase focused on an extensive and intensive review of the literature that was exploratory and descriptive in nature, and the second phase built on the review of the literature and was analytic and synthetic in nature. This approach had the benefit of providing time for review and reflection on the outcomes of the first phase before work was commenced on the development of theory. The approach had an additional benefit in that it added robustness to the second phase by providing a sound foundation on which the theory was built.

As illustrated in *Figure 2: The Research Design*, the methodological process was iterative in that the cycle of exploration and description, analysis and synthesis continued until robust and well informed theory could be developed. According to Leedy (1989: p79) the aim of all research is to discover knowledge. Since the discovery of knowledge involves a process of learning, the methodological process was mapped on the learning processes described by Kolb's Learning Cycle (Kolb, 1984) and Argyris' (1999) Double Loop Learning.

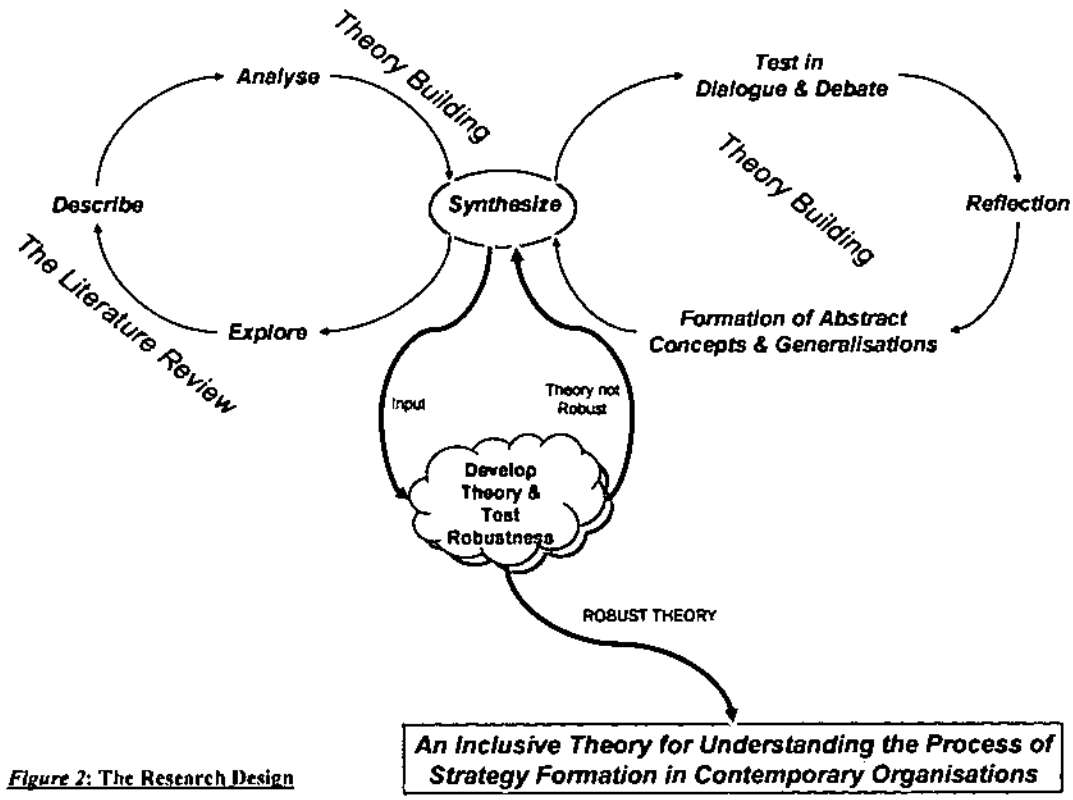


Figure 2: The Research Design

2.3 The Research Methodology

The research and the development of the thesis was divided into two distinct phases. The first phase concerned itself with the literature review and related activities, and the second phase built on the review of the literature and the development of theory for write up in this thesis. The two phases are titled:

- The Data Collection Process: Critical Literature Review, and
- Analysis and Synthesis of the Data: The Development of Theory.

The research methodology described in *Figure 3: The Research Methodology* consists of five distinct steps:

- Steps 1, 2 and part of 3 constitute 'The Data Collection Process' and
- The remainder of step 3 and steps 4 and 5 contribute to 'The Development of Theory'.

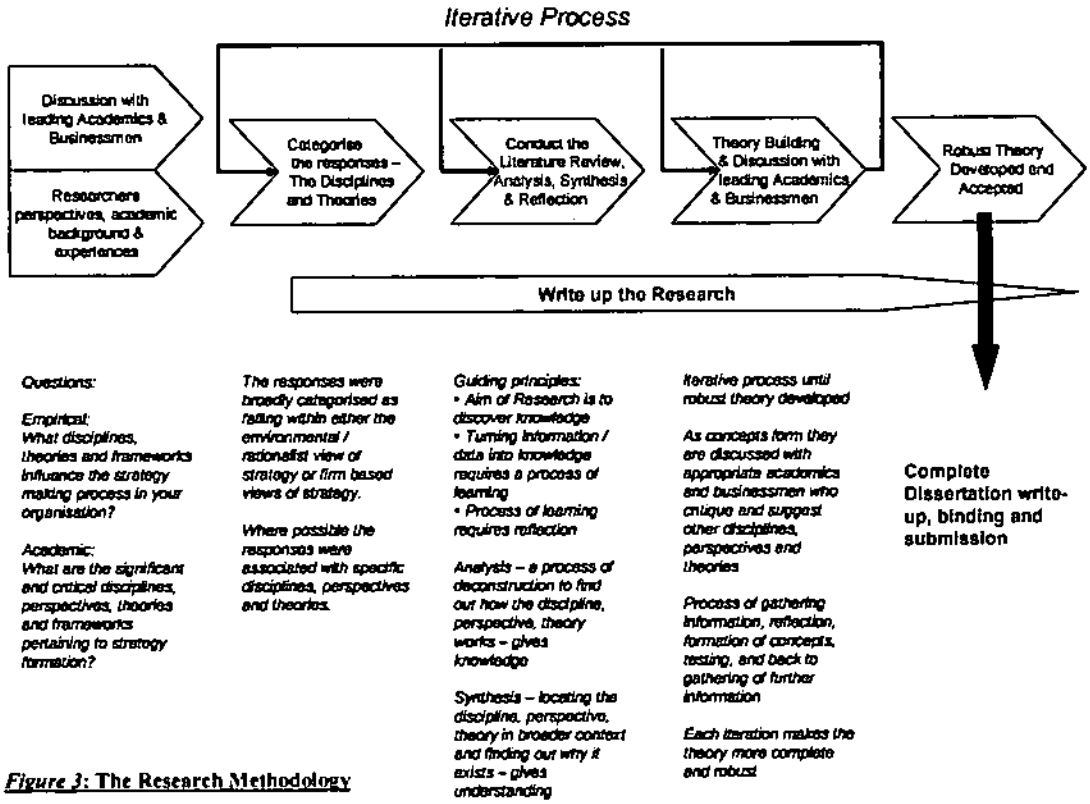


Figure 3: The Research Methodology

2.3.1 The Data Collection Process: Critical Literature Review

Mouton (2001) describes a review of the literature as a study that provides an overview of scholarship in a certain discipline through an analysis of trends and debates. Generally, the literature review informs a focused qualitative or quantitative study, but the emphasis and approach that is adopted will depend on how the literature review will be used in the thesis.

Saunders *et al* (2003: p45) explain the use of the literature review as follows: *"For some research projects you will use the literature review to help you to identify theories and ideas that you will test using data. This is known as a deductive approach. For other research projects you will be planning to explore your data and develop theories from them that you will subsequently relate to the literature. This is known as an inductive approach."* With the inductive approach it should be noted that although the research still has a clearly defined purpose with research questions and objectives, the researcher does not start with any predetermined theories or conceptual frameworks. This is useful, according to Saunders *et al* (2003), because *"You do not want your own ideas to be drowned out by the ideas in the literature"*.

It was the intention, and the objective, of this research to explore the data and develop theories that were subsequently related back to the literature. As such, the critical literature review for this thesis followed an inductive approach. Given the nature of the research problem and the context, the literature review also had to be extensive (cover a broad range of theories and perspectives) and intensive (cover the theories in a greater level of detail) in order to meet the research objectives.

Saunders *et al* (2003) are of the view that there are two main reasons for conducting a review of relevant literature: the first being to generate and refine the research ideas, and the second, often referred to as the *"critical review"* (Saunders *et al*, 2003: p43), is part of the *"research project proper"*. The critical review demonstrates the researchers' awareness of the current state of knowledge of the subject, its limitations, and how the research fits in this wider context. Mouton (2001) supports this view, stating that there

are two ways of looking at the literature review: either as a study on its own (a "literature study") or as the first phase of another study.

Mouton (2001) goes on to describe a review of the literature as a study that provides an overview of scholarship in a certain discipline through an analysis of trends and debates. These trends and debates were surfaced, described and documented through an extensive and intensive interdisciplinary review of the literature pertaining to strategy formation that included, but was not be limited to, systems theory, complexity theory, the importance of context, learning and change, decision theory, the environmental and firm based views of strategy (including all significant perspectives, theories and models), and scenario planning.

In addition, the literature review identified, described and documented:

1. Other academic disciplines that contribute to strategy formation in organisations;
2. The relevant and key perspectives and theories within each discipline that inform:
   - The analysis and synthesis of context,
   - The strategy formation process, and
   - The development of strategy content within organisations;
3. Trends and themes, other than those described above, that have impact on strategy formation;
4. Issues of meaning and explanation, and the linkages between theoretical perspectives and propositions.

The review of the literature utilised secondary data acquired from published academic and popular literature (books and journals), digital media (such as videos and DVDs), archives and databases, film and transcripts of conferences and forums, and the world-wide-web. A number of discussions and debates were initiated with academics and prominent business people where concepts and theories were identified for inclusion in the research.

2.3.2 Analysis and Synthesis of the Data: The Development of Theory

Theory-building studies are aimed at building new theories to explain particular phenomena, in the case of this thesis, the phenomenon of strategy formation in organisations. According to Mouton (2001) this approach raises a number of key questions that address issues of meaning and explanation, theoretical linkages and coherence between theoretical propositions, and the explanatory and predictive potential of theories.

The literature review, through an iterative process of exploration, analysis, reflection and further exploration, surfaced the underlying themes and provided new meanings to the myriad inter-discipline and intra-discipline theories and perspectives that lead to strategy formation. In addition, the linkages between disciplines, theories and perspectives were identified and a coherent framework, incorporating the various disciplines, theories and perspectives, developed. The inclusive and integrating theory of strategy formation, that was the ultimate objective of the thesis, emerged from this process.

In developing the inclusive theory of strategy formation both inductive and deductive reasoning strategies were applied. Thematic and systemic reasoning, applied to existing theory and disciplines, was used to synthesize the meanings and the various themes of the critical literature review, and deductive reasoning was used to analyse the review, develop further theoretical propositions, and establish a sound understanding of the various components of strategy formation (Mouton, 2001).

Throughout the course of Phase 2 an ongoing and iterative literature review was conducted with the objective of incorporating and validating the literature and the views, theories and experiences of academia and business organisations that surfaced during the development of theory. This facilitated further synthesis of theory development and literature (through an iterative literature, theory, literature, theory process) and resulted in a clear understanding of the theories and processes of strategy formation that lead to the development of robust theory.

As a first step in this process, subject matter experts (including, *inter alia*, systems, complexity, learning and change and strategy academics and practitioners) were asked to provide their insights on which perspectives and theories were relevant for a study of this nature and this generated a cross-disciplinary list of critical readings in the various subject domains. These subject matter experts were chosen randomly from the business, academic and strategy communities to which the author of this thesis belongs. This list of readings was supplemented by a second list compiled by the author of this thesis, and additional readings drawn from references contained in the books and articles on the reading lists.

The documented literature review generated during this process (consisting of the critical perspectives and theories related to strategy formation together with the linkages identified between the different theoretical propositions) were then subjected to a three stage process of analysis:

1. The underlying theories, themes, patterns and linkages within and between theoretical propositions that emerged from the readings were subjected to a process of analysis and reflection on the part of the researcher and new and different perspectives identified and documented. The analysis involved mapping the emergent information on existing theory (derived from the literature review, personal experience and the subject matter experts) in order to identify and expand on new perspectives and the emergence of new theory.

2. The outcomes of the first stage of analysis were presented to academics, strategy consultants / practitioners and businessmen with the intention of seeking validation of the perspectives and theories supporting the argument. This led to additional, new and insightful perspectives and theories for consideration, reflection and inclusion in the process of theory building.

3. On completion of the second stage of the analysis, further review, analysis and reflection by the researcher on the underlying theories, themes and linkages to theoretical propositions was conducted. This enhanced and shaped the output of the

first two stages of the analysis process and produced material for synthesis with the review of the literature and the development of new theory.

The process sought to leverage the exploratory and descriptive techniques (Saunders *et al*, 2003) to ensure that a richer picture was extracted from the information generated by the literature review. Initially, an exploratory research method was used to surface the underlying theories, themes, patterns and linkages between theoretical propositions. Subsequently, and in parallel with ongoing exploratory research, a descriptive method was applied to record, specify, expand and verify the findings of the exploratory research. The conversations with the 'guides' confirmed the relevance and validity of information recorded and gave direction to further exploration of emerging information and concepts.

2.4 Conclusion

The underlying intention of this research reflects the view of Mouton (2001) who stated: *"Science cannot make progress without theories and models. Through the construction of theories and models we attempt to explain phenomena in the world."* A theory can be defined as a set of statements or assertions that make explanatory or causal claims about the nature of reality. Good theories *"provide causal accounts of the world"*, bring *"conceptual coherence to a domain of science"*, and simplify our understanding of the world we live in (Mouton, 2001: p177).

It is important to note that the researcher wished to avoid 'colouring' the research with any predetermined perspectives, theories or concepts on the nature of strategy formation in contemporary organisations. As such, the research was designed to facilitate the emergence of new perspectives, theories and concepts through the exploration of the fundamentals of strategy formation. As Saunders *et al* (2003: p46) noted: the exploratory research method ensures the underlying theories, themes, patterns, and linkages, perspectives and theories will emerge and these can be related back *"to the literature. This is known as an inductive approach"* and it emphasizes the importance of the iterative literature review process.

This thesis seeks to explain the phenomenon of strategy formation in contemporary organisations, describe the reality of the strategy formation process and simplify our understanding of how best to codify effective strategy making. A special effort was made during the conduct of the research to ensure that *"overabstract formulations"* far removed from reality were avoided and that the theory developed was coherent, internally consistent and clear (Mouton, 2001: p177).

In closing, the research conducted for this thesis builds towards the development of an inclusive and integrating theory of strategy formation based on common theoretical and empirical platforms and utilising common themes. The empirical benefits of this objective are that the process of strategy formation and strategic decision making in organisations will be relevant and focused and not sidetracked by argument and debate around the merits and demerits of various theoretical positions, perspectives, frameworks and tools. As such, organisations will be better positioned to improve the efficiency of the strategy formation process and the effectiveness of strategy content and implementation. In addition, the research will help organisations to respond quickly and effectively to rapid and discontinuous change in their operating environments through the application of relevant and efficient strategy.

Chapter 3: THE LITERATURE REVIEW

The literature review examines the development of strategy formation theory over the course of the 20th Century and the beginning of the new millennium - with a particular emphasis on the contexts in which the development took place. This emphasis is critical to the thesis in that context provides the foundation on which information is gathered, analysed and synthesised in the effort to develop an integrating theory of strategy formation in organisations.

From a strategy perspective, and for the purposes of this thesis, context has both an internal and external orientation. Internally, the focus is on the people and the organisation and the relationships that exist at the individual, social group and organisational levels. Externally, the focus is on the political, social, economic, technological, market and competitive environments in which people and organisations are established.

During the conduct of the literature review it became evident that the development of strategy theory since mid-1950 followed either one or other of these two orientations and the literature review reflects this situation. However, it is important to note that while the literature review draws a distinction between the two orientations it does not mean that the two orientations are discrete; the distinction is only drawn for purposes of analysis and synthesis of the information generated in the literature review. In fact, both within and between the external and internal domains there exists an intricate network of relationships that means that the external and internal domains are inextricably connected.

This led to research beyond the traditional boundaries of the strategy discipline and into, *inter alia*, complexity and evolutionary theory, systems theory, psychology and philosophy, individual and organisational learning, and decision science. When this research was related to established strategy formation theory in both the external and internal domains and the ever-changing and highly complex business contexts of the 20th Century, a rich picture of the process of strategy formation emerged. This rich

picture provided a solid foundation on which to build a robust and integrating theory of strategy formation in contemporary organisations.

3.1 A World of Chaos and Complexity: A Systems View of Uncertainty

According to van der Heijden (1996: p94) *"The main problem in business environment analysis is dealing with complexity. There is a lot to consider. The world is large indeed and there is room for ever more interpretation of the events we observe. Another complication is that we will be considering the future, with its inherent uncertainties."* de Geus (1997) reflects the views of van der Heijden in his belief that uncertainty in the future operating environment, and the organisations response to this uncertainty, is the single biggest challenge facing the management of organisations today, and all other management issues arise from managements' responses to this challenge. According to Stacey (2002), these responses take the form of activities (or inactivity) that can be labelled strategic initiatives, which initiatives arise from formal or informal, conscious or unconscious strategy formation processes.

The literature, both popular and academic, is also replete with statements from senior executives of organisations, of all types, sizes and forms, that uncertainty in the operating environments of their organisations is the key management challenge, and the biggest strategic issue, their organisation has to face (Finney, 2002; Schoemaker, 2002; Pietersen, 2002; Cannon, 1996 and others). In fact, if we extend the literature review beyond senior executives to management and employees, we find the common belief that all organisations, regardless of their nature, face an uncertain future (Courtney, Kirkland and Viguerie, 1997).

Uncertainty exists not only because of internal management issues, or an inability of organisations to understand and adapt to changes in the market, but also because of the increasing complexity in the external operating environment (Johnson and Scholes, 2002). Hamel and Valikangas (2003) are of the view that this complexity has arisen because of globalisation, continual quick shifts in markets, the greater emphasis on networks in business, and the increasing importance of managing relationships at all levels from customer through the organisation and supplier to society as a whole.

According to Schoemaker (2002: p8), *"The rise in uncertainty is driven by a variety of factors. An ideological shift in politics and business from centralised planning toward free-market dynamics is resulting in much more complex socioeconomic systems. In addition, new technologies are accelerating change, often in a disruptive way. Furthermore, profound demographic changes and value shifts are occurring. All these forces combined result in much greater complexity."*

Let us also not forget that *"Life is inherently uncertain – from the moment of our birth to the unknown moment of our death – and yet we hate uncertainty, particularly in business"* Schoemaker (2002: p xiii). This is reflected in the pervasive attitude in organisations that skill in management is often seen as a process of avoiding surprises, and uncertainty an *"evil that detracts from one's ability to manage with control."*

This attitude is born out of a 17th century Newtonian image of the Universe, and for three centuries we've been *"planning, predicting and analysing the world"* based on an intense belief in the principle of cause and effect (Wheatley, 1999: p28). In our complex environment individuals and organisations often seek order through planning and organising for uncertainty, and exerting management control over all strategic and operating processes.

Wheatley (1999: p28) describes Newton's universe in an evocative fashion: *"As the great clock ticked, we grew smart and designed the age of machines. As the pendulum swung with perfect periodicity, it prodded us on to new discoveries. As the Earth circled the sun (just like clockwork), we grew assured of the role of determinism and prediction. We absorbed expectations of regularity into our very beings. And we organised work and knowledge based on our beliefs about this predictable universe."*

Lewin and Regine (2000: p5) resonate with Wheatley in stating *"Where once the natural world was viewed as linear and mechanistic, where simple cause-and-effect solutions were expected to explain the complex phenomena of nature, scientists now realise that much of the world is non-linear and organic, characterised by uncertainty and unpredictability."* As in science, managers of organisations are finding that their world is predominantly non-linear, organic and complex, and not linear and

mechanistic. Lewin and Regine use the metaphor of an *"ecosystem"* to describe this new view of the world.

The metaphor of the 'ecosystem' is clearly explained by Wheatley (1999: pp20-21) who sees life as creation, and uses the term 'autopoiesis' to describe the ability to create. Autopoiesis is life's process for creating and renewing itself for growth and adaptation. Furthermore, *"A living system is a network of processes in which every process contributes"* directly or indirectly *"to all other processes"* in an ever-dynamic structure that constantly seeks its own self-renewal. Capra (2002) extends the explanation of autopoiesis by stating that *"autopoiesis identifies the pattern of self-generating networks as a defining characteristic of life."*

Quantum physics, which can be used to describe life at the subatomic level, provides us with a theory that explains the process of autopoiesis. At the subatomic level change happens in jumps that are beyond any power of precise prediction. Furthermore, an observer cannot observe change *"without interfering or, more precisely, participating in its creation"* (Wheatley, 1999: p22). These qualities of the quantum call into question the scientific and philosophical beliefs in determinism, predictability and control, and seem to point to a world of chaos and disorder. However, the work of Prigogine (1998) points to some paradoxical truths, the most counter-intuitive being that chaos and disorder can be the source of new order.

Prigogine (1998) coined the term 'dissipative structures' to describe the contradictory nature of quantum physics. Wheatley (1999: p20) explains the contradiction: *"Dissipation describes loss, a process of energy gradually ebbing away, while structure describes embodied order. Prigogine discovered that the dissipative activity of loss was necessary to create new order."* This discovery answered two critical questions: *"If, as science believed, entropy is the rule, then why does life flourish?"* And, *"Why does life result in newness and evolution, not deterioration and disintegration?"*

According to Wheatley (1999: p22) order exists even in situations of absolute disorder – the state of existence we define as chaos. *"Chaos theory has given us images of 'strange attractors' – computer generated pictures of swirling motion that trace the evolution of*

a system. A system is defined as chaotic when it becomes impossible to know what it will do next. The system never behaves in the same way twice. But as chaos theory shows, if we look at such a system over time, it demonstrates an inherent orderliness. Its wild gyrations held within an invisible boundary." The existence of chaos transcends boundaries and throughout the universe *"order exists within disorder and disorder within order."*

The lessons of quantum theory and the theory of non-linear dynamics (also known as complexity theory) are clear: the principles of Newtonian physics, the machine metaphor and determinism, are losing relevance in a world characterised by non-linear and unpredictable change (discontinuous change). In addition, the current management paradigms in organisations, such as prediction, analysis, planning and control, need to be extended and changed, where appropriate, to reflect the reality of our 21st century existence.

Lewin and Regine (2000: pp6-8) provide another perspective to this assertion. They contend that in a linear world things may exist independently of each other, and when they interact, they do so in simple predictable ways. However, *"In a nonlinear, dynamic world, everything exists only in relationship to everything else, and the interactions among agents in the system lead to complex unpredictable outcomes."* As such, relationships and interactions become the organising principle.

For Lewin and Regine (2000) complexity theory in the world of business focuses on relationships: relationships between individuals, teams and broader organisations; relationships to other companies in the business environment or economic web; relationships to the world of politics and civil society; and relationships with the natural environment. This systemic view of the world of business requires different paradigms and world views, and an acceptance that managers and executives cannot control their organisations to the degree that the mechanistic perspective implies, but they can influence where their organisation is going and how it evolves. Organisations in rapidly changing business environments need to be able to learn quickly, innovate constantly, and continuously evolve and adapt to the changing circumstances of their operating environments if they are to survive. Success, in the face of uncertainty, requires

evolution in accordance with quantum theory and the principles of nonlinear dynamics and a determination to make the most of complexity.

In this new world of rapid and discontinuous change the traditional approaches to strategy formation, based on the acquisition and analysis of historic and current data and trends which are used to project the future state of markets and operating conditions, are becoming increasingly irrelevant (Lewin and Regine, 2000; Mintzberg, Ahlstrand and Lampel, 1998). This recognition of the shortcomings of traditional strategy approaches led to the development of firm based views of strategy (which rose to prominence in the last 10 years) as a means to managing the change that characterised operating environments from the late 1970's.

However, the internal focus of the firm based views is not a complete solution to the problem. It simply prepares organisations to respond quickly and effectively to rapid and discontinuous change without being clear on what form the change should take. In some cases it even allows organisations to initiate change in the operating environment (Hamel and Prahalad, 1994), but it still falls short of providing a clearer view of how the organisation should respond to what the future will bring. This suggests that the strategy discipline should move to an integrated and future orientated theory that accounts for the external environment while enhancing the firm based views of strategy to improve the quality of strategic decisions within the organisation.

3.2 The Organisation as a System

People conduct their lives in accordance with a set of values, beliefs and perceptions that are formed by individual theories of the nature of life and existence. The most general theory that each and every individual holds is a theory of reality, of the nature of the world, a theory we call our worldview (Ackoff, 1996: p1). A shared worldview is the glue that holds a culture together, *"and it characterises what historians call an age. An age is simply a period of time in which a culture has a single, shared view of the nature of reality."* According to Ackoff we are in the early stages of a change of age – a transformation from one worldview to another.

The worldview that is fading away arose during the Renaissance and came to be known as the Machine Age or, as Wheatley (1999) describes it, the Newtonian view of the universe. The machine age was premised on three primary assumptions (Ackoff, 1996):

- The universe is completely understandable;
- Analysis is inquiry; and
- Everything can be explained in terms of cause and effect.

The consequences of cause and effect thinking are threefold: there has to be a first all-encompassing cause and that is God, environmental factors are excluded as causal explanations for anything, and everything is predetermined – nothing happens by chance (Ackoff, 1996).

During the 20th century phenomena and events called into question the universal validity of the machine view of reality and posited an alternative view which Ackoff calls the Systems Age. This age stresses the relationships between all things and the importance of environment as an agent within a system. The seeds for this age were sown when Werner Heisenberg published his revolutionary findings on the behaviour of the atom in 1923 and Ludwig von Bertalanffy his treatise titled "General Systems Theory" in 1953.

According to Ackoff (1996) a system is a whole that is made up of two or more parts, each part affecting the behaviour of the whole depending on the parts interaction with other parts of the system. The essential properties that define any system are properties of the whole and none of the parts, discretely, have those properties. *"Once we take a system apart it loses its defining characteristic. If we were to disassemble a car, for example, even if we kept every piece we would no longer have a car. Why? Because the automobile is not the sum of its parts, it is the product of the parts' interactions."* Ackoff (1996: p7).

To understand a system, analysis says 'take it apart', but the act of taking it apart causes a system to lose its essential properties. As a result we cannot understand the nature of a system by traditional analysis and we need another way of thinking. This new way of thinking came to be known as synthesis and it is the *"polar opposite of analysis"*: analysis is useful for revealing *"how a system works (its structure) and gives us knowledge"*, and synthesis reveals why a system works the way it does and *"gives us*

understanding" (Ackoff, 1996). Systems thinking is more about synthesis than it is about analysis, but both synthesis and analysis have their place - a view expressed by Arthur Singer Jr. (in Ackoff, 1996) when he contextualised the machine and systems views of reality by showing that cause and effect thinking is only one of a number of ways of looking at reality. Reality, Singer explained, is not one or *"two dimensional, it is multidimensional"*, and the systems view is not an alternative to cause and effect, it is complementary to it.

Flood and Jackson (1991) stress that, in the modern systems approach, *"the concept 'system' is used not to refer to things in the world but to a particular way of organising our thoughts about the world."* Flood and Jackson go on to state that they consider the notion of a 'system' as an organising concept that uses system metaphors for structuring thinking about organisations and problem situations. The use of metaphor to categorise system types was picked up by de Geus (1997: pp10-11) who uses metaphor to describe commercial organisations as *"living companies"* which, like human beings, exist *"primarily for"* their *"own survival and improvement: to fulfil"* their *"potential and to become as great as"* they *"can be."* Morgan (1998) resonated with this view when he wrote that the medium of organisation and management is metaphor, and management theory and practice is shaped by metaphorical processes that shape nearly everything we do. Morgan went on to identify the five key metaphors that, in his view, describe organisations:

- Machines, where the management focus is on control and efficiency;
- Organisms, where the focus is on development and adaptation;
- Brains, where the focus is on learning;
- Cultures, where the focus is on values and beliefs;
- Systems of government, where the focus is on conflicts of interest and power.

Morgan's metaphors correspond with the conceptual framework developed by Capra (2002: p89), who states that *"the organism and brain metaphors address the biological and cognitive dimensions of life"*, while *"the culture and government metaphors represent various aspects of the social dimension. The main contrast is between the metaphor of organisations as machines and that of organisations as living systems."* The question that Capra's framework poses is "what is a living system?"

If we contrast the five system metaphors of Flood and Jackson (1991) with the five systems metaphors identified by Morgan (1998), we see that the metaphors are substantially the same. Flood and Jackson's metaphors are:

- Machine metaphor or 'closed system' view;
- Organic metaphor or 'open system' view;
- Neurocybernetic metaphor or 'viable system' view;
- Cultural metaphor; and
- Political metaphor.

It can be argued that the "living system" is made up of the organic, neurocybernetic or brain, the cultural and political metaphors. Stacey (2000) argues that complex adaptive systems, which are analogous to the organic / biological and brain / neurocybernetic metaphors, when combined with the cultural and political metaphors produce complex responsive processes. The complex responsive process of Stacey is a good description for a living system, and it also describes what happens in de Geus' (1997) *"living companies"*. Figure 2: "Two Views of Organisational Systems", adapted from Senge (1997), contrasts the "Machine" metaphor with the "Living Systems" metaphor:

The Metaphor of the Organisation
as a "Machine"



Seeing the organisation as a **"Machine" System:**

- implies that it is fixed and static;
- implies that its only sense of identity is that given to it by its builders;
- implies that its actions are actually reactions to goals and decisions made by management;
- implies that it will run down, unless it is rebuilt by management;
- implies that its members are employees, or worse, "human resources", humans standing in reserve waiting to be used;
- implies that it learns only as the sum of the learning of its individual employees.

The Metaphor of the Organisation
as a "Living System"



Seeing the organisation as a **"Living" System:**

- means that it evolves naturally;
- means that it has its own sense of identity, its own personhood;
- means that it has its own goals and its own capacity for autonomous action;
- means that it is capable of regenerating itself, of continuity as an identifiable entity beyond its present members;
- means seeing the organisations members as human work communities, or social systems;
- means that it can learn as an entity, and the organisational learning is greater than the sum of the learning of the individual employees.

Figure 4: Two Views of Organisational Systems

Created from text: Peter Senge – (from foreword to "The Living Company" by Arie de Geus (Harvard Business School Press: 1997)

In order to situate organisations within their environment, specifically with regard to complexity and the resultant uncertainty, it is useful to review the five metaphors and understand their organisational implications:

1. The "Machine" Metaphor or "Closed System View".

The view of the universe as a "machine" dominated management and organisational theory for the first half of the 20th century and was typified by the "scientific management" theories of Taylor (1947). According to Capra (2002: p90), the principles of scientific, or classical, management theory have become so deeply ingrained in the ways we think about organisations *"that, for most managers, the design of formal structures, linked by clear lines of communication, co-ordination and control, has become almost second nature."* Capra (2002: p91) considers this to be one of the main obstacles to organisational learning, adaptation and evolution in today's organisations, and states that *"it is clear that organisations managed in strictly mechanistic ways cannot survive in today's complex, knowledge-oriented and rapidly changing business environment."*

Flood and Jackson (1991) elaborate on the "Machine" metaphor: *"The machine operates in a routine and repetitive fashion and performs predetermined sets of activities, seeking the rational and efficient means of reaching preset goals and objectives."* More generally, there is a considerable emphasis on control within the organisation, and little emphasis on the environment in which the organisation operates. This approach is useful when the environment is stable, the task to be performed is straightforward, and where there is repetitive production of a single or few products. The approach also assumes that the people in the machine organisation will willingly *"fit"* into the machine design and are prepared to follow machine like instructions. The downsides of the machine organisation are that flexibility, adaptability and the potential for organisational evolution is severely inhibited, and the organisation becomes vulnerable in complex environments. Such organisations also require a *"mindless contribution"* from their people *"that is difficult to maintain with mindful parts"* (Flood and Jackson, 1991: p9).

2. The "Organic" Metaphor or "Open System" View:

The first challenge to the machine view came from the *"mindful parts"* or, more specifically, human relations theory. *"It was perceived that attention had to be given to the human aspect of organisations"* and it became increasingly prevalent to treat organisations as if they were organisms with psychological and social needs and abilities (Flood and Jackson, 1991, p9). The "Organic" metaphor drew on biology, ecology and evolutionary theory and held to the idea that the "organism" or organisation is an open system. The open system is a complex network of elements and relationships that interact, forming highly organised feedback loops, and *"existing in an environment from which it draws inputs and to which it dispenses outputs"*. As such, an open system is self regulated, importing energy to maintain a steady state – unlike a machine system that is closed and degrades through wear and tear (Flood and Jackson, 1991: p10). This ability to *"self regulate"* makes survival and adaptability key concepts of open systems within the organic metaphor.

According to Flood and Jackson (1991), open systems promote responsiveness and change within organisations and are suited to complex environments with fluid market dynamics and / or with a variety of competitors. Open systems work well where there are open relationships within changing and evolving environments that are characterised by the shifting needs of people, but open systems do not recognise that organisations are socially constructed phenomena that must be understood from the point of view of the people within them (Flood and Jackson, 1991). As such, this view emphasises harmonious relations between the parts when, in organisations, they are often conflictual and / or coercive. Perhaps the most important aspect of open systems theory is that change is seen as being generated externally, as the system adapts to its environment, and does not allow for proactive internal development.

3. "Neurocybernetic" Metaphor or "Viable System" View:

This view of systems thinking developed in parallel with the open systems view, and emphasises active learning and control rather than the passive adaptability and reactive nature of the organic metaphor or open systems view (Flood and Jackson, 1991). The

neurocybernetic view looks to the brain as a tried and tested control system that depends on the ability to communicate and learn. That is, it can accept dynamic rather than static objective setting and is reflective and self evaluating rather than just self regulating.

The viable systems view is most suitable where the environment is characterised by a high degree of uncertainty. It promotes dynamic goal seeking based on learning and a process of self-enquiry and self-criticism and, most importantly, promotes creativity and innovation. While acknowledging that this view recognises the importance of people in systems theory, Flood and Jackson (1991) also note that the neurocybernetic system metaphor has a downside: the view does not recognise that organisations are socially constructed phenomena. This social dimension includes the situations where individual purpose sometimes does not correspond with organisational purpose, and relationships between people that are characterised by conflict and / or coercion. Furthermore, evolution requires change that would threaten those favoured by the status quo and will be resisted.

4. The "Culture" Metaphor:

This is a powerful metaphor can be used to consider almost any organisation or problem situation. It is best understood as the often unspoken but familiar ways of thinking and acting that exist in all firms and enterprises. According to Flood and Jackson (1991: p12) *"culture is a shared reality, or a socially constructed reality (of values and beliefs), that deems certain social practices to be normal, acceptable and desirable."* Culture is important in all organisations because it determines how the organisation will react to change and what change will be considered feasible. As such, culture can act as a restraining force or as a force for innovation and evolution.

Flood and Jackson (1991) believe that the culture metaphor offers a new perspective on organisational change, and recognition and management of the values and perspectives of employees has a positive evolutionary impact on organisations. For Flood and Jackson the cultural view shows that the 'rational' aspects of organisational life are only 'rational' in terms of the prevailing culture in an organisation and contrasting the culture with other cultures and beliefs can lead to change and innovation. This highlights the

value of diversity, both internally and within the external operating environment of an organisation.

The negative side of the cultural metaphor is that it may lead to ideological control that generates feelings of manipulation, resentment and mistrust amongst agents in the system and this often results in a dysfunctional system. Use of the metaphor is also problematic in situations where there is political in-fighting within the organisation.

5. The "Political" Metaphor:

This metaphor sees the relationships between individuals and groups as competitive and involving the pursuit of power. It highlights all organisational activity as interest based and emphasises the key role of power in determining political outcomes – thereby placing conflict and power at the centre of all organisational analyses (Flood and Jackson 1991). Industrial relations literature and theory states that there are three contrasting views on the character of any political situation and these are labelled: unitary (a team metaphor), pluralist (a coalition metaphor) and coercive (a prison / authoritarian metaphor). This facilitates the analysis of the types of relationship between participants in any given situation (Flood and Jackson, 1991).

This paradigm recognises the organisational actor as political for both motivational and structural reasons, and emphasises that goals may be rational for some actors while not so for others. This prompts the question: "Whose rationality is being pursued?" The political view breaks down when recognition of the politics of the situation leads to further politicisation, polarisation and generates mistrust. The political view may also overemphasise the need to handle political issues at the expense of other factors which are essential to organisational health such as attending to the needs of the market and developing appropriate organisational structures and processes (Flood and Jackson, 1991).

In concluding this overview, it is worth reiterating the views of Capra (2002) on the nature of systems. While Capra acknowledges the five systems metaphors, he holds to the opinion that there are, essentially, only two categories of system that describe our

existence: that of the machine and that of the living system. The five metaphors that have been described above are, however, useful for analysis and synthesis – the processes employed for understanding the nature of a system under inquiry.

According to the systems view of life, the spontaneous emergence of order and the dynamics of the constant structural changes that are characteristic of all living systems, are the phenomena that enable the process of learning. Moreover, according to Capra (2002: p88) *"we have seen that the creation of knowledge in social networks is a key characteristic of the dynamics of culture."* Combining these insights and applying them to organisational learning allows us to clarify the conditions under which learning, knowledge creation and organisational evolution takes place. This will provide essential guidelines for the management of organisations that operate under conditions of complexity and uncertainty.

3.3 Individual and Organisational Learning: Context and Theories

Learning is a multi-faceted activity that takes place in various contexts, is dependant on the motivations and world views of the learners, and is composed of numerous layers made up of a cross-pollinated mix of context, motivations, world views, and the individual and collective ability to learn (Rogers, 2000). According to Rogers, learning is a question of focus and consists of four critical elements:

- Learning theories focusing on who is doing the learning;
- Learning theories focusing on the context;
- Learning theories focusing on the kind of learning task being undertaken;
- Learning theories focusing on the processes involved.

Each of these four elements comes with theoretical perspectives on the nature of learning, and each provides a piece of the mosaic that gives us a picture of why and how people, society and organisations learn.

3.3.1 Theories of How Individuals Learn

Perhaps the most often debated aspect of learning is centred on Learner Based Theories which propose that learners change over time, some adopting a growth model (linear

and natural) and others a developmental model (diverse and purposeful change) (Rogers, 2002). The four key theories are:

1. *Behaviourist* that suggests the main aim of learning is to change behaviour, and that stimuli from outside the individual provoke responses that can be directed towards achieving desired behavioural changes. In this situation society, organisations or individuals, acting as the teacher, controls the process by selecting the stimuli and reinforcing the required responses. The learner is passive and only the "right" response is rewarded. This essentially linear process of learning limits creativity and tends to stifle innovation (Rogers, 2000).
2. *Cognitive* theories *"direct attention to the activity of the learner in creating the response and to the nature of knowledge itself"* (Rogers, 2002). The concept of intelligence as the basis of learning capability is central to this theory, as is the active engagement of the mind in processing data, managing perceptions, developing memory and facilitating insights. Although the learner is active rather than passive, the learning activity is bounded by the structure and sequence of the knowledge.
3. *Personality* theories are based on the distribution of personality types along a continuum of one type or another. Learning, according to these theories, depends on an individuals' perception of the subject and of their perceptions of themselves. The danger of this approach is that individuals are categorised, and this inhibits learning by narrowing learning options to those that are appropriate for the category in which the individual finds him / herself.
4. *Humanism* emerged as a response to the above theories, all of which reduce the control of the learners over their own learning, and are associated with theories that eschew the certainties of empirical science and the conclusions of objective research (Rogers, 2002). They introduce a world of living complexity, uncertainty, instability, the uniqueness of individual response and the conflicts of values (Rogers, 2002). Most importantly, these theories reassert the *"agency of the learner in the learning process"* and *"stress that it is the learners' actions which ... create the learning situation"* (Rogers, 2002).

The Context Based Theories are premised on situating the learner in a social context where they suggest that learning is created and structured by ongoing interaction

between the individual and the outside world. Each learning experience is unique and specific to a situation that is infrequently, if ever, duplicated. There are three primary theories in this category:

1. *Human Communications* theory which holds that communication links people together into an organisation established and maintained to achieve a common purpose. The organisation can be two or more people who transact through a communication process which involves a source (initiator), a transmission, a message and a receiver. There is inevitably distortion in the transmission and feedback is an essential element of the process. Learning, according to Rogers (2002), is a *"process of change based on reactions to the continuous reception of messages."*
2. *Social Learning* theory emphasises the importance of relationships and interaction in learning and suggests that our primary learning comes from the imitation and internalisation of value systems which we acquire from family groups, social groups and peers. This shapes our perceptions and attitudes and determines how we manifest (through behaviour) in any given situation. The theory *"emphasises the active engagement of the person with the environment"* (Rogers, 2002) and role playing and modelling are important learning tools. It is important to note that the role an individual plays is socially and culturally constructed and is subject to constant change and reinterpretation.
3. *Situated Learning* suggests that we all learn by participating in activities with others as social beings. According to Lave and Wenger (1991) learning takes place when learners place themselves in *"legitimate peripheral participation situations"* on the *"edge of communities of practice"* where they learn the language, values, attitudes and practices that are necessary for participation in a particular community. Such learning can be limiting in that the individual may be confined to a particular community context, may be subject to the power relationships that exist in this environment (through the values and assumptions of the powerful in the community), and may be focused on the community rather than embrace a more holistic view that accounts for and acknowledges the environment in which the community is situated.

Situated Learning theory is challenged by Critical Theory which postulates that society and organisations privilege certain knowledge and behaviour and thereby create power relationships that affect every learning context – especially situated learning. As such, learning is *"circumscribed by the sociocultural context within which it takes place"* Rogers (2002). Furthermore, modern learning theories have explored the engagement of the individual with the environment in a more holistic sense – not just the social or organisational environment. This suggests that we are all made up by our experiences, that experience is us: *"Cognition and environment become simultaneously enacted through experiential learning"* (Fenwick, 2001).

The Knowledge Based Learning theories focus on some infrequently explored aspects of learning – the *"influence exerted by different kinds of knowledge"* and *"the subject matter of the different learning tasks"*. These theories state that *"the interaction of learner, context, and processes in learning is incomplete without considering the knowing to be achieved in the learning"* (Rogers, 2002). The important consideration here being the conversion of information derived from experience into knowledge. According to Sallis and Jones (2002), *"Knowledge is information in use, and it is the interaction of information with the human mind that gives it meaning and purpose."* Habermas (1978) identified three kinds of knowing:

- Instrumental / technical knowing – the acquisition and use of skills and understanding needed to manage the world we live in;
- Communicative knowing – interpersonal relationships and social / cultural understanding;
- Emancipatory knowing – self understanding and awareness of the cultural and personal predispositions that affect the way we act.

It is likely that any kind of learning will involve all three types of 'knowing' in proportions that will be determined by the learning situation. The knowledge based learning theories also distinguish between *'socialisation learning'*, which is the internalisation of external knowing including socially based value systems, and *'individuation learning'* which is creation of ones own knowing and is essential to being an individual (Rogers, 2002).

The Process Based Theories seek to explain *how* people learn. There are two dominant theories in this school of thought:

1. *Critical Reflection on Experience*: Freire (1972) suggests that learning takes place when experience is critically analysed and individuals act on the basis of this analysis and Schon (1983) talks of learning as reflective practice. According to Freire (1972) the learning cycle starts with experience, proceeds to the individual reflecting on this experience and taking action which in turn becomes concrete experience for further reflection and a new stage in the learning cycle. Action is an essential part of the learning process, not a result of learning, and not *"an add-on"* at the end. Rogers (2002) believes that Freires' learning cycle needs to be adapted to account for what Kolb (1984) refers to as *"abstract conceptualisations"* which arise when critical reflection leads to the development of generalisations. Critical reflection can be seen as asking questions about experience in the light of other experience and *"abstract conceptualisations may be seen as going beyond the specific answers to general principles. Only in this way will new insights generated by critical reflection become usable in other contexts."* Furthermore, according to Rogers (2002), learning includes goals, intentions, choice and decision making, and it is not clear where these elements fit into the learning cycle. The problem with critical reflection theory is that there is a danger of being normative and prescriptive in describing the way adults learn and this detracts from the application of this theory.
2. *Constructivism.* According to Rogers (2002), *"cognitivist views stress the interaction of the learner with a body of knowledge that lies outside of themselves, and therefore the key process is the transfer of information from an expert source to the learner."* Constructivism is a response to this view. Kelly (1955) states that learning is not determined by external influences – each individual creates their own learning. We form personal constructs from our ideas, feelings, and memories, evaluation of events, places and people in our lives or from our cultural background. *"In this way we create the world and manipulate it rather than respond to stimuli or to external knowledge."* From a scenario planning perspective, the most important element of constructivism is that the act of learning is largely initiated by the learner, *"exploring and extending their own understanding, holding what has been called 'a*

learning conversation' ... and *"making individualised perceptions of reality, meanings and knowledge"* Rogers (2002). As such, learning does not mean the discovery of new or hidden truths but the construction of new perceptions.

The theories of learning, as applied to individuals, provide a foundation for conceptualising how individuals acquire knowledge and understanding (or 'make sense') of the environments in which they live and work, but the social and organisational constructs arising from the individual's existence also have 'sense-making' mechanisms that leverage the combined knowledge and understanding of their individual members. This is known as social or organisational learning.

3.3.2 Theories of How Organisations Learn

All organisations learn to a greater or lesser extent. According to Dilworth (1995: p255) the *"problem is that many organizations are learning disabled or cause workforce members to learn business practices ill-suited to the times."* The key is to develop *"organizations that learn naturally and effectively"*.

Organizational learning takes place in various organisational and social contexts and through the individual and his or her relationships with other individuals that reside within and outside the organisations' boundary. These networks of learning can be described as systems and, as we have seen in systems theory (Ackoff, 1996), the learning of the system often exceeds the sum of the learning of the systems parts.

Senge (1990: p7) also describes the organisational network as a system *"bound by invisible fabrics of interrelated actions"*, and notes that organisations are not particularly efficient learning systems because many organisations are characterised by mental models rooted in what Ackoff (1996), Wheatley (1999) and others have termed a linear and mechanistic view of the world. This view is premised on planning, prediction, analysis and an *"intense belief in the principle of cause and effect"*. Embedded in these mental models is the illusion that *"the world is created of separate, unrelated forces"* and, according to Senge (1990: p3), only *"when we give up this illusion"* can we *"build learning organizations ...where people are continually learning how to learn together"*.

Kofman and Senge (1995: p32) in considering what is meant by a learning organisation suggest that such an organisation would need to embody capabilities beyond those of traditional organisations:

- *"A culture based on transcendent human values,*
- *A set of practices for generative conversation and co-ordinated action, and*
- *A capacity to see and work with the flow of life as a system."*

On the point of culture, Vaclav Havel (in Chawla and Renesch, 1995: p13) reflects the views of Kofman and Senge in stating that *"... it is clearly necessary to invent organizational structures appropriate for the multicultural age. But such efforts are doomed to failure if they do not grow out of something deeper, out of generally held values."*

The perspectives of Havel, Kofman and Senge provide a pointer to those seeking the source of organisational learning. Hofstede (1991), in his ground-breaking work on organisational culture, states that culture is made up of values and practices. For Hofstede, values are deeply rooted beliefs about the nature of the world and reality, and practices are acquired and internalised through a process of socialisation in group contexts. Differences in the values-practices balance between individuals in different contexts (see Figure 5: The Nature of Culture: From Nations to Organisations below) *"can be explained by the different places of 'socialization' (learning) for values and practices"* (Hofstede, 1991: p182).

According to Hofstede, values are acquired through a learning process in early youth, mainly in the family and early social situations such as the neighbourhood and school, and by the time the individual reaches puberty his or her values are deeply embedded in the mind. Practices, on the other hand, are learned through a process of socialization in social and organisational contexts such as School, University and in Organizations (political, social and economic).

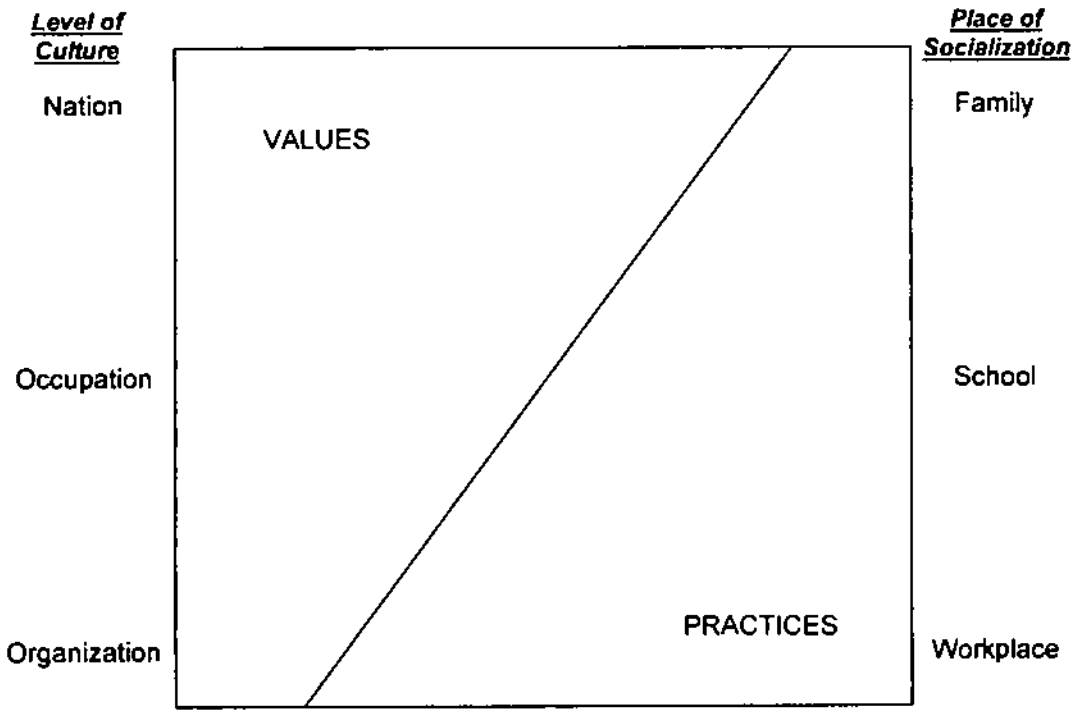


Figure 5: The Nature of Culture – From Nations to Organizations

Source: Hofstede G. (1991) Cultures and Organizations Harper Collins Publishers, London

What is important is that both values and practices (the primary building blocks of culture) are acquired through a process of learning and form part of what Senge (1990) and Weintraub (1995) refer to as mental models. According to Senge (1990: p8) mental models are the *"deeply ingrained assumptions, generalizations, or even pictures and images that influence how we understand the world and how we take action"*. Weintraub (1995: p417) elaborates on Senge's proposition in stating that *"the mental models of an organisation constitute its culture"*.

In essence, these mental models or organisational culture are a primary determinant of how individuals in an organisational context learn – they use the values and practices that shape the organisational culture as a heuristic for the learning process. What is interesting is that the same heuristic, through a learning process, can lead to change in the values and practices that define the organisation. This is a defining characteristic of a "living system" as defined by Capra (2002), de Geus (1997) and Senge (1997), and reflects the non-linear and evolutionary nature of the learning organisation.

Schwandt (1995: pp365-367) also commented on the non-linear and evolutionary nature of the learning organisation. He states that we *"are engaged in a struggle to understand the complexities of organizations in a changing environment"* and *"this struggle is perceived as being between order and chaos."* According to Schwandt the *"theories and models we employ in our understanding of this struggle are limited to narrow sets of conditions and singular frames of reference"* and *"organizational life has become dichotomized into 'either-or' choices"*. For Schwandt this thinking is not compatible with the concept of the learning organisation which *"assumes that systems of social actions are non-linear and open, and inherently evolve toward higher states of complexity."*

Schwandt reflects the concerns of Kofman and Senge (1995: P16) who argue that "*the main dysfunctions in our institutions – fragmentation, competition, and reactiveness – are actually by-products of our success over thousands of years in conquering the physical world and in developing our scientific, industrial culture. So, it should come as no surprise that these dysfunctions are deeply rooted. Nor should it surprise us that our first response, "to overcome these problems", is part of the very mindset that generated them. Fragmentation, competition, and reactiveness are not problems to be solved – they are frozen patterns of thought to be dissolved.*" The "*solvent*" proposed by Kofman and Senge is "*a new way of thinking, feeling, and being: a culture of systems.*"

Fragmentary thinking becomes systemic "*when we recover 'the memory of the whole', the awareness that wholes actually precede parts*", competition becomes cooperation "*when we discover the community nature of the self*" and reactiveness becomes creating "*when we see the generative power of language*". For Kofman and Senge "*In the new systems worldview we move from the primacy of pieces to the primacy of the whole, from absolute truths to coherent interpretations, from self to community, from problem solving to creating.*"

To achieve the ideals of the systemic world, according to Senge (1990: pp6-10), the learning organisation should master five disciples, or incorporate five *"component technologies"*, each of which provides a critical dimension in *"building organisations that can truly learn"*:

- Systems thinking. "*Systems thinking is a conceptual framework*" that helps us to clarify patterns and enhance our understanding of the social or organisational context we are studying. "*Business and other human endeavours are also systems*", however we tend to "*focus on snapshots of isolated parts of the systems*" because of our mental models which tend to drive us towards analysis.
- Personal mastery. This is "*the discipline of continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively*". An organisations commitment to and capacity for "*learning can be no greater than that of its members*". Senge's primary interest in the discipline of personal mastery is in enhancing the connections between personal learning and organisational learning and the reciprocal commitments between the individual and the organization.
- Mental Models. As discussed above, mental models influence how we perceive and understand the world and how we take action. Arie de Geus (1988 and 1997) says that continuous adaptation and growth in a changing business environment depends on "*institutional learning*" which is a process whereby management teams change their shared mental models of their organisation, their markets and their competitors. This is dependent on the ability of individuals in teams, and within the organization, to carry on learning conversations that "*balance enquiry and advocacy*" and "*people expose their own thinking effectively and make that thinking open to the influence of others*".
- Building shared vision. This involves unearthing and establishing "*shared pictures of the future*" that foster genuine commitment and enrolment to a vision that binds people together around a "*common identity and sense of destiny*". This encourages people to excel, learn and evolve in accordance with the vision and what it takes to achieve the vision.
- Team learning. This is critical because individuals learning as teams, and not only in their individual capacity, are the fundamental learning unit in modern organizations. In this situation individual learning is leveraged and the intelligence of the team will exceed the sum of the intelligence of the individuals in the team. According to Senge the discipline of team learning "*starts with 'dialogue', the capacity of members of a team to suspend assumptions and enter into a genuine 'thinking together'*".

Senge (1990: p12) goes on to state that "*systems thinking is the fifth discipline. It is the discipline that integrates the disciplines, fusing them into a coherent body of theory and practice.*" This statement is premised on Senge's view that systems thinking makes understandable "*the subtlest aspect of the learning organisation*" – the way individuals perceive themselves and the world in which they live. This gets to the heart of the nature of the mental models that characterise organisations today. This view is shared by Dilworth (1995: p244) who identifies "*a systems thinking learning process*" where the "*mental models we carry in our heads*" determines what we perceive and how we make decisions and, consequently, how we take action – both individually and in an organisational context.

3.4 Cognition and Decision Making

There is general consensus among scholars that organisations do not learn as entities but learn through their members and the interactions and inter-relationships between these members (Hodgkinson and Sparrow, 2002; Hedberg, 1981; Spender, 1989; Bougon, 1992 and Eden, 1992). Hedberg (1981) uses an excellent metaphor to illustrate this contention: "*individuals act on a stage – which is the organization – and learn from this acting.*" This perspective has led to many scholars projecting models of individual learning onto the organization and using this mechanism to describe, explain and develop theory for organizational learning.

As a theoretical foundation for this approach, scholars use the concept of cognitive change as the basis for understanding organizational learning. Accordingly "*Cognition and learning are seen as two sides of the same coin.*" (Hodgkinson and Sparrow, 2002: p49). For Argyris and Schon (1978) organizations learn as their individual members learn and knowledge is acquired and developed by individuals and embedded in an organizational memory.

It is evident from the literature that the starting point for individual and organisational learning lies between the ears of the individuals – as themselves and as members of a particular organisation. In the above discussion on learning the concept of 'mental

models' was explored, and it was suggested that the values and practices which, in part, constitute these mental models are used as a heuristic for individual and organisational learning. However, it is important to note that mental models are considerably more than just a set of values and practices, and it is necessary to also explore ideas and concepts such as cognition, sense-making, and rationality in order to fully understand how learning and knowledge building takes place, and how it is applied in organisations.

3.4.1 Cognition, Mental Models and Sense-Making

Porac and Thomas (2002) have noted that the study of cognition and cognitive science has grown in relevance for the field of strategic management over the past 15 years. This is, in part, due to the extensive research and writings of Stubbart (1989) and Walsh (1995) who have examined and commented on the potential linkages between managerial and organisational cognition and the theory and practice of strategic management. According to Porac and Thomas (2002: p165) "*three distinct research streams are evident from the literature*":

- The "*cognitive literature in behavioural decision theory*" which is focused on the "*cognitive biases, heuristics and limitations inherent in the process of judgement and choice*" (see also: Hogarth, 1980);
- An extensive methodological literature concerned primarily with techniques for developing cognitive maps, causal diagrams and cognitive structures from individuals (see also: Huff, 1990);
- A large and fast-growing body of research examining the linkages between cognition and decision processes in strategic management with regard to strategy formation and implementation (see also: Stubbart, 1989 and Walsh, 1995).

Individual, managerial and organisational cognition draws on concepts, theories and methods from, *inter alia*, cognitive psychology, cognitive anthropology and social cognition to create a perspective that focuses on the subjectivity and limitations of human information processing. According to Hodgkinson and Jenkins (2002: p177), this "*rapidly developing*" and "*exciting line of inquiry*" has "*raised a number of fundamental questions and led to new insights that challenge the very foundations of the strategy field.*"

Cognitive psychology as a field of study "*evolved in part as a reaction against behaviourism*" which proposes that "*since all human behaviour is essentially generated in response to stimuli, it should be possible to develop satisfactory accounts of behaviour in stimulus-response terms without recourse to concepts relating to 'under-the-skin' phenomena such as 'perception', 'attention' and 'memory'*" (Hodgkinson and Jenkins, 2002: pp177 – 178). In practice, stimulus-response theories are unable to account for all but the most simple of behaviours and cognitive psychology has become the dominant line of enquiry into decision making and behaviour.

The study of cognition focuses on the analysis of the various intervening mental processes that mediate the individuals' responses to the environment. As such, cognitive psychology suggests that the way an individual acts is driven by the way in which the individual interprets his or her world (mental models and perception) and this is shaped, in part, by the individuals' past experiences and learning (Wickens, 1984; Hodgkinson and Jenkins, 2002; Porac and Thomas, 2002). Managerial and organisational scholars have linked the general idea that actors develop internal representations of their worlds to organisational decision making and action (Huff, 1990; Walsh, 1995).

The managerial and organisational cognition perspective of strategy, according to Hodgkinson and Jenkins (2002: p177), is premised on four principles:

- "*Individuals are limited in their ability to process the rich variety of stimuli contained in the external world*". Simon (1997: pp87 – 88) refers to this constraint as "*bounded rationality*".
- Consequently "*they employ a variety of strategies*" to reduce the amount and complexity of information that they must process in most situations or contexts.
- "*This culminates in the development of a simplified representation of reality that is encoded in the mind of the individual*".
- Once formed, these "*mental representations*" or mental models act as filters through which new information is processed and this, in turn, "*may lead to biased and inappropriate decisions, but under certain circumstances may also form the basis of creative ideas and new insights.*"

The application of cognitive science in the field of managerial and organisational cognition is "*driven by the need to understand the role of the individual decision-maker in the process of problem formulation and strategic decision-making*" (Porac and Thomas, 2002: p165). This builds on the argument of March and Simon (1958) who state that organisations can be understood as cognitive phenomena that derive from and, in turn, influence the mental models, frames of reference, knowledge structures and knowledge-based processes of their participants.

The emphasis of March and Simon (1958) and Simon (1955, 1956 and 1997) is on processes of 'bounded rationality' which contradict the view that decision processes are intentionally rational. Empirically, according to Porac and Thomas (2002), it has been shown that decision makers are likely to construct their own reality, exhibit biases and use cognitive simplification mechanisms (e.g. heuristics or 'rules-of-thumb) in processes of strategic decision and choice. This perspective is supported by the work of Barnes (1984) and Schwenk (1984) who noted the considerable influence of cognitive biases, simplification mechanisms and heuristics in framing strategic problems, identifying and diagnosing strategic issues, and in making strategic decisions.

A relevant, interesting and explanatory perspective on individual, managerial and organisational cognition can be found in Weick (1995 and 2001). Weick advances the concept of sensemaking which, Weick suggests, is well named because it literally means the making of sense. Dunbar, 1981, Goleman, 1985 and Starbuck and Milliken (1988) are of the view that that sensemaking involves placing stimuli into some kind of framework. The well known phrase 'frame of reference' is derived from the term 'framework' and has traditionally meant a generalised point of view that directs interpretations.

Louis (1980) sees sensemaking as a thinking process that uses retrospective learning to explain new phenomena. Accordingly she suggests that the activity of placing stimuli into frameworks is most visible when expectations and predictions break down. Starbuck and Milliken (1988, p51) build on the 'framework' concept in stating that people put stimuli into frameworks to enable them "*to comprehend, understand, explain, attribute, extrapolate and predict*". This is supported by Westley (1990, p337)

who suggests that people use strategy as a framework that "*involves procurement, production, synthesis, manipulation and diffusion of information in such a way as to give meaning, purpose and direction to the organisation.*"

Sackman (1991: p33) goes further than viewing sensemaking in terms of frameworks and talks about sensemaking mechanisms that organizational members use to attribute meaning to events - mechanisms that "*include the standards and rules for perceiving, interpreting, believing, and acting that are typically used in a given cultural setting.*" Feldman (1989: p19) also explains the concept of sensemaking differently in proposing that sensemaking is an interpretive process that is necessary "*for organizational members to understand and to share understandings about such features of the organization as what it is about, what it does well and poorly, what the problems it faces are, and how it should resolve them.*" Ring and Rands (1989: p342) define sensemaking as "*a process in which individuals develop cognitive maps of their environment,*" and sensemaking can be linked to Porac *et al* (1989) assertions that meaning is created when cues are linked with well-learned and/or developing cognitive structures – sensemaking being a mechanism for creating meaning in the mind of the individual.

Much of the content on cognition, mental models and sensemaking explored above is captured in the lyrical writing of Porac *et al* (1989: p400) (also recorded by Weick, 1995: p133): "*Sensemaking is about the enlargement of small cues. It is a search for contexts within which small details fit together and make sense. It is people interacting to flesh out hunches. It is a continuous alternation between particulars and explanations, with each cycle giving added form and substance to the other. It is about building confidence as the particulars begin to cohere and as the explanation allows increasingly accurate deductions. The image here is one of people making do with whatever they have, comparing notes, often imitating one another directly or indirectly, and then operating as if they had some sense of what was up, at least for the time being. They keep checking with one another, if that is possible, knowing that the sense they have created is transient and can collapse at any moment.*" At the heart of this passage is a feeling, an idea, an intuition that sense and cognition ebb and flow and evolve with

time, context, and the learning cycles of the individual, and the organisation to which the individual belongs.

3.4.2 Objective and Subjective Rationality

Acting rationally is a commonly used term and most people like to think that they are rational. However, the misunderstandings and disagreements that characterise everyday life in the world and organisations are mostly caused by different people living with different concepts of rationality. As such, it is necessary to enquire into what is meant by rationality and, to make sense of the concept, it is important to keep in mind the broader socio-economic context in which individuals and organisations are embedded and within which claims to be rational are rooted (Jackson and Carter, 2000).

The words rational and reason are both derived from the Latin for 'to think'. Over the centuries there has been dialogue, debate and argument, on the part of both scholars and laymen, in an effort to understand rationality – especially in terms of decision making and the resultant action or inaction. During this time many definitions of rationality have been proposed and questions asked about the extent to which rationality is possible – notably in the concept of 'bounded rationality' in the field of Organisational Studies (Jackson and Carter, 2000). Rather than attempt to produce another 'definitive statement' on rationality, the approach adopted in this overview focuses on presenting Jackson and Carter's persuasive arguments regarding the nature of rationality and linking these arguments to strategy.

Most perspectives on strategic management are based on two core assumptions according to Johnson and Greenwood (2002). The first assumption is that the world of the social construct known as an organisation is an objective reality capable of examination and analysis. The second assumption is that members (managers and employees) of the organisation behave in an essentially rational and analytical way to make sense of the world. This partly reflects the views of Jackson and Carter (2000: p97) who are of the opinion that there are two "*distinct and opposing sets of beliefs about what the world is like*". One is known as a realist view and is premised on the belief that "*the world in general and organisations in particular are objectively real*

and exist independently of the people who inhabit them." The second belief takes the view that "*the world in general and arganisations in particular are socially constructed, the product of the interactions, understandings and power relationships that characterise human existence and human affairs.*" Both these sets of beliefs are underpinned by different and distinct views about the nature of reality and how people think.

While in the full context of their respective books Johnson and Greenwood (2002) and Jackson and Carter (2000) are presenting the same argument, the different approaches they have adopted raises an important point. Both sets of authors state that there is a perspective that views the organisation as an objective reality independent of the people who inhabit it but, in essence, they make different statements about the rationality of the people that make up the organisation.

Johnson and Greenwood (2002), in developing their argument, highlight the assumption that people behave in an essentially rational and analytical way to make sense of the world, while Jackson and Carter (2000) describe organisations as being socially constructed and "*the product of the interactions, understandings and power relationships that characterise human existence and human affairs*". As such, Johnson and Greenwood have described the concept of objective rationality and Jackson and Carter suggest that the interactions and interrelationships that characterise human affairs will lead to perspectives that result in rationality becoming subjective. This needs to be explored in the light of the theory on cognition, mental models and sensemaking discussed above.

The concept of 'bounded rationality' (Simon, 1955 and 1956) is premised on the argument that perfectly rational behaviour is not achievable because of cognitive limits on the ability to gather and process information and to determine the significance of the information that is gathered. Therefore, the argument goes, people will "*seek to act as rationally as possible, given their circumstances and constraints. Perfectly rational behaviour would imply that, when making a decision of any kind, the decision-maker is able to gather all the information relevant to that decision, rank it in significance and make a reasoned choice between alternatives*". The whole point about rationality is its

role in choosing between alternatives, and the critical significance of rationality in behaviour is that it becomes operative only when decisions have to be made (Jackson and Carter, 2000: pp97 -98).

The essence of rationality lies in the relationship between the means and the ends. In all decision situations those that have to make the decision will have certain ends in mind, but there will generally be more than one means to achieve the ends. Equally, the courses of action (means) following the choice or choices that are made will have different outcomes. "*We will want to choose the best, or the least worst, outcome in terms of our desired ends .... Thus, when confronted with a situation requiring choice between alternatives, we employ reason to arrive at a rational decision, by thinking about the possible consequences of each alternative and then choosing the optimum course of action. The optimum, or best, in this sense is the one that furnishes the most utility*" (Jackson and Carter, 2000: p98).

To illustrate the concept of utility in terms of rationality, Jackson and Carter suggest that utility can sometimes be expressed as satisfaction which is often understood in terms of the most pleasure or the least pain. By way of example: if a person is offered the choice between R100 and a punch on the nose, one would assume that the rational choice for the person would be to take the R100 – R100 would buy pleasure but the punch on the nose would cause pain. However, if the person faced with the choice is a masochist, perhaps the person would prefer the punch on the nose! This highlights the point noted above – in an organisational context there are a number of different rationalities that often lead to misunderstandings and disagreements over decisions that need to be taken by agents acting on behalf of the organisation.

This leads us to the question of objective rationality. Many who consider rationality to be an objective phenomenon view it as impartial, impersonal, and value-neutral. "*Objective rationality is a matter of formal logic which is not influenced by individual subjectivity. Thus, in a given situation one decision, or course of action, is rational, and all other possibilities are therefore irrational by definition*" (Jackson and Carter, 2000: p99). Furthermore, on every occasion of this situation arising, all other things being

equal, the same decision will be the rational one. As such, the rationality resides in the situation so that in all like circumstances the correct answer is the same.

There are, however, some difficulties associated with this view. Simple observation of individuals and their behaviour in organisations tells us that everyone is different in one way or another, and "*the profound individuality of understanding and meaning, superficially shared at best,*" must lead us to the conclusion that the possibility in any situation that "*a view is held equally by all participants is extremely unlikely*", and "*the possibility that any situation*" can "*be an exact replica of another situation is also, and equally, extremely unlikely*". Even if such a situation were to arise, the "*possibility that the same decision is valid because of the nature of the situation is untenable, because it assumes that the situation itself precludes the exercise of free choice by actors – that people must decide the same thing because they have no alternative*" (Jackson and Carter, 2000: p101).

Jackson and Carter's concerns with the application of objective rationality in organisational contexts can be summarised in the following three points:

- The problem of value judgements – where there are no independent and objective measures for assessing a situation, a process or an objective. When given a case of wine it is possible to objectively state that there are x number of bottles in the case and all would agree with this number, but if asked if the wine is a good or a bad wine opinions would probably differ between those asked the question. This is because the answer will depend on the individuals' subjective value-based judgement on the quality of the wine.
- The assumption that 'all things are equal' – the circumstances of a particular situation are seen in the same way by all those affected by the situation. Furthermore all those affected by the situation should reach consensus on the 'means' and the 'end' for dealing with the situation.
- The assumption that all participants in the situation share the same objectives - in a particular situation one 'means' and 'end' may be desirable to one specific person, but not to another. For example a retrenchment package in a company seeking to rationalise its cost base may be appealing to an individual in the early stages of his

career (he receives a cash lump sum and can look for a job elsewhere) but it may be less desirable to an individual close to retirement who is unable to find another job.

It may seem obvious from the above that what is rational is largely dependent upon individual cognitive maps and mental models but, according to Jackson and Carter (2000: p100), "*this understanding is largely absent from the discourse of Organisational Behaviour and, indeed, from Management Theory in general. To accept such a view of rationality would have enormous implications for the process of management as a whole, and especially for the management of organisational behaviour*".

In juxtaposition to those who consider rationality to be an objective phenomenon, there are those who view rationality as a subjective phenomenon, seeing rationality as a characteristic of the individual and not as a function of a particular set of circumstances. This is the substance of Jackson and Carter's concerns (noted above) and the argument they present about the arbitrary application of objective rationality to any and all situations. Subjective rationality acknowledges that differences exist in the cognitive maps and mental models of individuals and that this will manifest in the thinking, sensemaking and decision processes of individuals regardless of the situation.

This raises some noteworthy points. If rationality is subjective, decisions only have to "*appear rational*" to the individual subject. Furthermore, it can be "*quite rational to make a conscious decision to follow a course of action which is acknowledged to be irrational*". After all, there is no reason why utility cannot be gained or satisfaction/pleasure derived from an apparently irrational decision (Jackson and Carter, 2000: p101).

In conclusion, Jackson and Carter state that from a subjectivist point of view none of the assumptions underlying objective rationality are valid where people are involved. This assertion is based on their observation that there is no aspect of organisational behaviour, in practice or theory, "*that is not based on subjective values, norms and preferences, no aspect of which is available to be characterised in terms appropriate to the concept of objective rationality. Indeed, it might be suggested that the only reason*

why objective reality is an issue at all in this context – although it is an important reason – is that those with power to signify use this concept to prioritise their own subjective preferences and to present these as unchallengeable and legitimate" (Jackson and Carter, 2000: pp101–103).

As such, "*the conditions of objective rationality cannot be satisfied in any situation that involves people*" and, therefore, "*objective rationality is not applicable in any aspect of the social world.*" This strongly argues that "*the concept of objective rationality is not appropriate in the context of organisational behaviour*". More importantly, the implications of this argument are far-reaching for prevailing theories of management, strategy and decision making in organisations, calling into question many behaviours and practices that currently characterise contemporary approaches to management.

3.4.3 Decision Making: Normative and Descriptive Models

As an academic subject, management decision making is made up of a wide range of different and diverse theoretical perspectives and approaches that reflect the individual interests, experiences, disciplines and biases of many authors. It draws on a number of disciplines including, but not limited to, psychology, sociology, mathematics and philosophy, as well as new concepts from systems theory, complexity theory and chaos theory. However, as "*a practical day-to-day activity, decision-making is a holistic phenomenon. As humans we do not consciously differentiate between psychological, sociological and philosophical dimensions to our actions: we simply act*" (Teale, Dispenza, Flynn and Currie, 2003: Preface, p xiii).

There is, therefore, a difference in the way we research and theorise about decision making, and the way we actually make decisions. Academic research on management decision making has tended to fragment into discrete and increasingly specialised areas of analysis while managers continue to make decisions based on gut feeling, intuition and the best available data / information (Teale *et al*, 2003). This is the basis for structuring this review of decision making in terms of normative and descriptive models of decision making.

According to Teale *et al* (2003: p16 - 17) normative models are prescriptive and tend to provide guidelines on how decisions should be made. The basis is therefore idealistic rather than descriptive. Simple normative models (see Figure 6. below) tend to assume that decision makers:

- "*have an extremely sound basis of knowledge available to them*", they can identify an appropriate range of options, and they can "*successfully predict an extensive variety of outcomes*";
- "*have excellent judgement, so they can rank all possible outcomes in terms of value*";
- "*are logical, rational and objective in the way they make decisions*".

If one were to make a list of words that would be key to defining management decision making and present them in a "*linear, sequential format, according to how decisions are made in general*" we would "*most likely end up with a typical normative model of decision making*". In essence, this is what a normative approach reflects – "*a general, context free theory of decision making*". It is general because it is often used to "*identify abstract stages in a process that purports to represent the way decisions are made*", and it is context free because, "*being general and abstract, it need not concern itself with the vagaries and problems*" associated with the "*actual decisions made by specific individuals in particular organisations.*"

This perspective was acknowledged by Cooke and Slack (1991) who, while proposing a normative theoretical model of decision making that depicts the decision process as a specific and prescriptive cycle with a feedback process, noted that decision making is rarely so clearly defined and sequential in practice. For Teale *et al* (2003), the model proposed by Cooke and Slack is reductionist in nature and attempts to identify and describe elements of a decision that can be generalised – hence it is a normative model.

In contrast to normative approaches which tell us how things *should* happen, descriptive approaches tell us how things *do* happen. According to Teale et al (2003: p17), descriptive models are more concerned with the 'bounded' manner in which decision makers operate. "*Our rationality is bounded not just by psychological factors, but also by sociological factors*", and it incorporates certain key factors of decision making such

as, *inter alia*, cognitive profiles, personal agendas, self preservation and the avoidance of responsibility, as well as "*political manoeuvring and the notion of risk avoidance*".

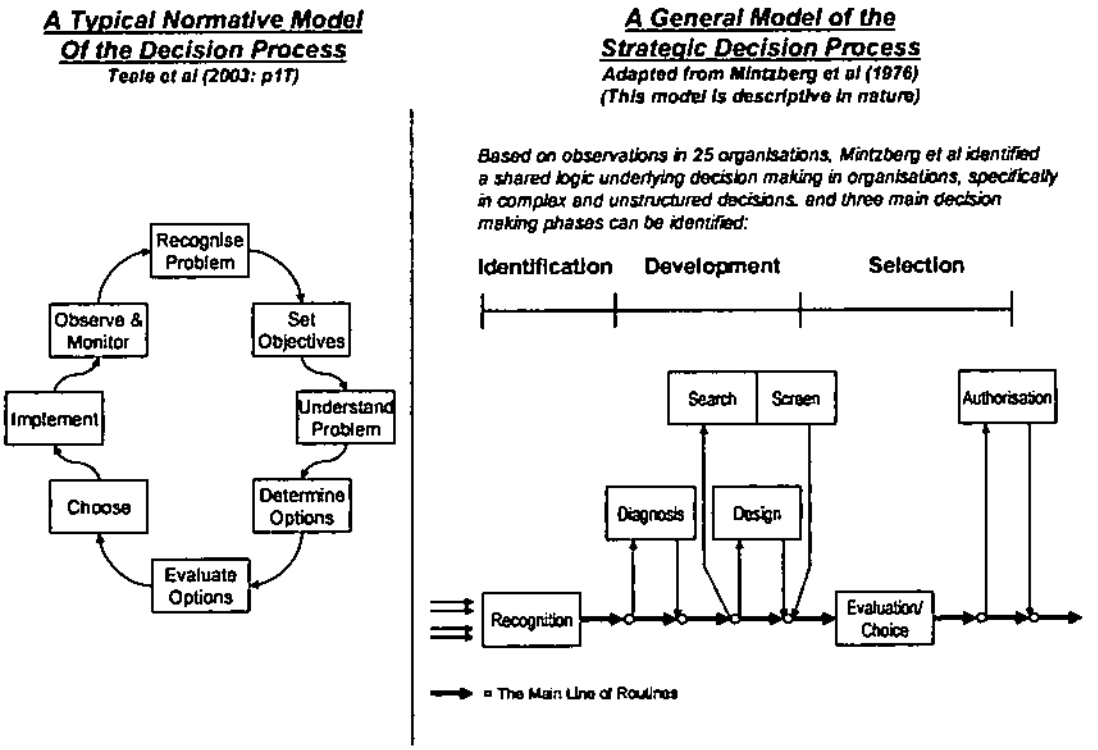


Figure 6: Normative and Descriptive Models of Decision Making

Source: Mintzberg C., Raisinghani D., & Theoret A. (1976). *The structure of 'unstructured' decision processes*. Administrative Science Quarterly: Vol. 21. Teale M., Dopson V., Flynn J. & Currie D. (2003). *Management Decision-Making*. FT Prentice Hall, UK.

Jennings and Wattam (1998: p1) observed that decision making is an activity that lies at the heart of management and to "*the extent that*" decisions "*are not the result of constraints imposed from outside*," (as a result of decisions taken externally to the organisation) "*all the actions of an organisation are, explicitly or implicitly, the result of management decision making.*" According to Teale *et al* (2003) decisions are usually affected by, or effect, a change in the status quo of a particular situation. Either way, individuals, and / or organisations will find themselves in a period of uncertainty and will consciously or unconsciously attempt to make sense of the situation. The results of this sensemaking process present the individuals or organisation with a choice from a number of alternative courses of action (one of which will be no action) and the final choice will manifest as a decision after which the appropriate action (or no action) will take place.

The nature of the decision being made will vary from situation to situation and context to context. Generally speaking, according to Teale *et al* (2003), there is a broadly accepted typology that characterises decision making:

- Decisions can be simple or complex or anything in between;
- Simple decisions tend to be *structured* (they are clear, unambiguous and easily definable), *programmed* (rely on some form of predetermined organisational apparatus, routine or process that is invoked when a particular problem occurs), and tend to be *operational* (concerning the day-to-day running of the organisation).
- Complex decisions tend to be *unstructured* (unclear, ambiguous and difficult to define), *non-programmed* (no precedent or procedural guidelines exist), and *strategic* (involve a fundamental change in ideology and/or authority and therefore the direction of the organisation).

Koopman, Broekhuijsen and Wierdsma (1998) are of the opinion that "*complex decision-making has traditionally been a focus of attention in the management literature*" and such decision making "*usually involves broad lines of strategy*". This has involved the often normative and typically rational approach of Ansoff (1965) Andrews (1980) and Porter (1980), and the more recent studies that are empirical and descriptive in their treatment of decision making such as Quinn (1980b), March (1994), Mintzberg *et al* (1998) and Mintzberg *et al* (2003).

The development in decision making literature has made rationality a central issue in decision making, but the empirically based descriptive studies have shown that complex decision making usually involves a process that goes beyond the simple application of rationality to decision making situations. The questions that have been raised in the 'descriptive' literature include: To what extent does thinking precede action? What is the relationship between facts and intuition? What is the role of information? When are rational planning systems wise? How are political positions reconciled? (Starbuck, 1985; Lawrence, 1985 and Koopman *et al*, 1998). There is no allowance made for these questions when a paradigm of rationality is adopted.

If we take the view that decision making focuses on producing outcomes that should deliver on objectives established before the decision takes place, Harrison (1995) suggests that there are four models that can be applied:

MODEL	PRIMARY CRITERION	KEY INGREDIENTS
Rational *(Classical)*	Maximized Outcome	Clear objective, quantified utility, exhaustive alternatives, computational decision making strategy
Organisational *(Behavioral)*	Satisficing Outcome	Limited subjective probabilities, non-exhaustive alternatives, moderately structured process
Garbage Can	Unspecified Chance	Unclear or inconsistent goals, a technology that is unclear or little understood by members, a highly variable member participation
Political *(Arena)*	Acceptable Outcome	Multiple objectives, coalition formation, compromise or bargaining decision making strategy

Figure 7: Four Decision Making Models

Adapted from: Harrison E.F. (1995). *The Managerial Decision Making Process*, 4th Edition Houghton Mifflin, Boston MA.

The rational model is normative in nature in that it prescribes an ideal way of acting in decision making situations. This model is extensively applied in rational and quantitative disciplines such as economics and statistics, and it assumes that the decision maker strives for a decision with a maximum yield. The rational model allows for one or several decision makers and one or more goals but the basic assumptions are always known goals, unlimited availability of information, no cognitive limitations as well as no limitations in terms of time and costs, and quantifiable options. Decision making is regarded as a logical process and decision makers will always seek to maximise their outcomes in an orderly series of steps (Harrison, 1995 and Koopman *et al*, 1998). According to Taylor (1992), Winter (1985) and Lawrence (1985), rational–analytic models make valuable contributions to strategic decision making by providing quantitative and detailed information through forecasting models and decision analysis

tools. As such, these models provide normative aids for improving the quality of decision making in the organisation.

While the rational model is useful in certain situations it does not account for the cognitive limitations of individuals (March and Simon, 1958, Simon, 1955 and Simon, 1956). According to Koopman *et al* (1995), this shortcoming led to the development of the organizational or behavioural model which focused attention on the restrictions faced by decision makers. These 'restrictions' arise because the decision maker has limited cognitive capacity and this leads to a subjectively selective and partial use of the information that is available. Time and money considerations also play a role in determining whether there will be a search for more information and how long the search will last. The search process usually stops when a 'satisficing' solution has been found – as such, alternatives are not studied exhaustively. Kahneman and Tversky (1984) point out more specific limitations on human decision making, specifically the oversimplification processes that occur in more complex and ambiguous decision making situations, and Hogarth (1987) describes two major conclusions in research on intuitive thinking as a basis for decision making:

- First, even simple laboratory tests require more information processing capacity than most humans have, and
- Second, cognitive research has revealed that people misperceive information content, process information sequentially to accommodate their poor integrative capacity, and have very limited memory.

Schwenk (1988a) also investigated a number of cognitive mechanisms seen in strategic decision making and came to the conclusion that decision-makers become fixated on one solution at an early stage and give insufficient consideration to other alternatives and options that are available. An explanation for this phenomenon can be found in Simon (1955 and 1956), where it is suggested that the search for solutions mostly starts close to home where first solutions are explored based on situations that the organisation successfully resolved in the past (the experience and learning effect). By following these experiences, existing procedures and current policy people try to avoid uncertainty and make sense of the situation. Only when old recipes, frameworks and rules of thumb fail do people start to look at new possibilities. The "*Administrative*

Man" (Simon, 1997) makes do with the option that offers just enough satisfaction from an aspirational perspective while avoiding, as far as possible, unnecessary investments in time and resources.

The third model, the garbage can model, comes from the work of Cohen, March and Olsen (1972) who based their model on their experiences with decision making processes at universities. This model suggests that some organisations are 'organised anarchies' characterised by unclear or inconsistent goals, a technology that is obscure and little understood by members, and highly variable member participation. According to Cohen *et al*, organisations can be viewed as collections of problems, solutions, participants and choice opportunities. Choice opportunities are situations in which participants are expected to link problems to solutions and, thus, make decisions. These four elements are more or less randomly mixed together in a 'garbage can' leading to an unpredictable series of combinations.

Cohen *et al* (1972: p2) state that although "*it may be convenient to imagine that choice opportunities lead first to the generation of decision alternatives, then to an examination of their consequences, then to an evaluation of these consequences in terms of objectives, and finally to a decision, this type of model is often a poor description of what actually happens*". Miller, Hickson and Wilson (1996: p84), in commenting on the 'garbage can' model, noted that not only are the means and ends of decision processes disconnected, but solutions to problems are in existence before the problems are even recognised. "*The conventionally accepted order of things is transformed, put back to front, jumbled beyond recognition .... Decisions do get made, although the process is about as far removed from rational choice prescriptions as it is possible to get.*" This is not to suggest that systematic decision making cannot be discovered in such organisations but, on the contrary, the essence of the message is that "*seeming anarchy has a structure and an organization, which form a reasonable, although not optimal, answer to the great environmental uncertainty in which the participants find themselves*" (Koopman et al, 1995: p361).

The political model views organisations as a constantly changing and evolving series of coalitions where decision making is primarily a political process in which negotiations

play a central role. This is because the model assumes that the various players in an organisational context usually have divergent, contrasting and sometimes conflicting goals. As a result, according to Bacharach and Lawler (1986) and Pettigrew (1973), conflict and the way it is handled is critical to the decision making process in the political model. This shifts the emphasis from a search for the 'right' decision to a search for decisions that are acceptable to all coalition partners (Hosking and Morley, 1991 and Koopman 1992).

This phenomenon was also noted by Pfeffer and Salancik (1978) who suggested that differences within and between societies, organisations and individuals, and the different environments in which the various parties must exist, leads to differences of opinion on objectives, and the technologies and resources used to achieve the objectives. These differences also lead to a seemingly paradoxical situation in that there is a considerable interdependence among the various organisational members for achievement of organisational objectives and resource usage and this, almost inevitably, leads to conflict. But, Pfeffer (1981a) emphasises, this conflict does not always lead to attempts to gain or exercise control. This is because the investment and risk involved in the exertion of power to gain control is generally high and, as a result, the problem must be sufficiently important and the chances of success must be good before power is exerted.

Power has two sources: power from within the organisation itself, and the power that resides in specific individuals. The division of tasks among organisational members and the different characteristics of each individual leads to one unavoidable side effect – differences in the division of power in the organisation. Hickson, Hinnings, Lee, Schneck and Pennings (1971) in applying their 'strategic contingency theory of intra-organizational power' described how the division of power in organisations is subject to critical dependencies: the power of organisational sub-units is dependent on the extent to which they can reduce environmental uncertainty for the organisation, the extent to which they can be replaced, and the extent to which their activities are central to the successful operations of the organisation. Another view of power is that there are demonstrable power sources. French and Raven (1959) identified five sources: reward,

force, legitimacy, reference and expertise. Pettigrew (1973) and O'Reilly (1983) added a sixth source – the control of available and relevant information.

According to Mintzberg (1983), in order to play the 'political game' successfully an individual must not only have access to sufficient power sources but must also have the will and capacity to use them. But this in itself is not sufficient. Pfeffer (1981a) and Clegg (1987), amongst others, have identified the use of language and the legitimation of the exercise of power as critical elements for the successful conduct of the power or political game. The question that this raises is: why is the exercise of power and winning the political game important? According to Lye (1998: p115) politics "*is concerned with the competition for power and power is a necessary attribute for any individual or group wishing to take and implement a decision*". Miller *et al* (1996: p75 and p80) support this perspective in stating "*decisions can be viewed as being fundamentally concerned with the allocation and exercise of power in organisations*" and, as a result, "*decision-making is far removed from the coolly logical appraisal and selection of alternatives. Rather it is at the centre of political machinations and intrigue, the true nature of which is not always fully recognised, even by those involved.*"

Decisions in an organisation are taken for many reasons, but the most notable are to influence the 'direction' of the organisation, the allocation of scarce resources, and to further the personal interests of individuals (Teale, 2003; Lye, 1998; Jennings and Wattam, 1998; Koopman *et al*, 1995; Pettigrew, 1973). These decisions, regardless of the source or motivation, lead to actions in organisations which, ideally, will meet the objectives and satisfy the needs of the decision takers and political players who were party to the decision. According to Brunsson (1982: pp109 - 111) a "*decision is normally described as a conscious choice between at least two alternative actions*" and "*for decisions to initiate actions, they must incorporate cognitive, motivational and committal aspects.*"

The above exploration of decision making is important to this thesis in that decisions and decision making are critical components of strategy formation. Teale *et al* (2003: p xiv) make an important point regarding this assertion: "*Although it could be argued that each decision is a unique occurrence, it is equally true that decision-making often*

follows patterns or phases". Teale *et al*'s point builds on the contention of Andrews (1987: p71) that "*strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes or goals*" and "*produces the principal policies and plans for achieving those goals*".

This also reflects the findings of Mintzberg (1978: p934) who defined strategy as "*a pattern in a stream of decisions*" in order to "*study both strategies that were intended and those that were realized.*" Mintzberg and Waters (1985 and 1987) subsequently refined this definition to "*a pattern in a stream of actions*", at the time suggesting that evolutionary strategy may not owe its existence to an explicit decision. However, Mintzberg and Waters (1985) also remarked that these two views of strategy are not contradictory but complementary. According to de Wit and Meyer (2004: p105), "*Intended strategy is what individuals or organizations formulate prior to action (a pattern of decisions), while realized strategy refers to the strategic behaviour exhibited in practice (a pattern of actions). Of course, not all behaviour is necessarily strategic – if the actions do not follow a pattern directed at achieving the organization's purpose, it does not qualify as strategy.*"

3.5 Perspectives on Strategy and Organisation

According to Faulkner and Campbell (2003), the primary source of theory and structure in strategy or strategic management is economics. Pettigrew *et al* (2002: p7) share this view, stating that the strategy discipline has consistently reached out "*to the theoretical apparatus of economics*". However, it is also the view of a number of writers, including John Kay and Henry Mintzberg, that strategy came into existence and developed as a theoretical discipline in response to the frustration of managers at the limited help economics was able to provide in the running of their businesses.

What is clear is that despite the emergence of strategic management as a discipline in its own right, and the limiting assumptions that underlie neo-classical economics, the economic discipline is clearly visible in many of the perspectives and frameworks that academics, researchers, writers and practitioners of strategy and strategic management have developed. Be this as it may, the contributions of psychologists, sociologists,

philosophers, military strategists, political scientists, systems and evolutionary theorists, and others, has also led to the rapid and comprehensive development of the strategy discipline over the past 25 years.

This segment of the literature review on strategy and strategic management acknowledges the contributions from the various and diverse disciplines that make up the mainstream perspectives of strategy. It also highlights the fragmentation evident in the strategy discipline and notes the seemingly irreconcilable differences between a number of the positions maintained by contributors to the development of strategy. It must be noted though that one thing is evident in virtually all writings on strategy, and on this point there is no argument, strategy is a critical discipline for the successful management of business – regardless of its strengths and shortcomings.

3.5.1 Strategy: A Brief History

Until the mid to late 1980's the dominant strategy paradigm was what has become known, depending on the perspective adopted, as the environmental (Chandler, 1962; Andrews, 1980) or rationalist (Tidd, Bessant and Pavitt, 2001; Faulkner and Campbell, 2003) or planning (de Wit and Meyer, 1998; Ansoff), or prescriptive (Mintzberg *et al*, 1998; de Wit and Meyer, 2004) approach to strategy formulation. This approach employs the mechanistic, linear, cause and effect thinking of the "Machine" Age, and is rooted in military thinking, the theories of industrial economics and the principles of "Scientific Management" (Taylor, 1947) or classical management theory. Stacey (2000 and 2003), who calls the environmental / rationalist approach Strategic Choice Theory, refers to cybernetic systems thinking as a predominant characteristic of this view of strategy formulation.

This strategy paradigm, also referred to as the "traditional" strategy paradigm by a number of authors including Pietersen (2002), Mintzberg *et al* (1998), de Wit and Meyer (1998), Stacey (2000), Lewin and Regine (2000) and others, became less relevant as accelerating and discontinuous change in the last quarter of the 20th Century brought huge complexity to the external operating environment. This resulted in traditional

strategy development, mainly because of the lack of relevance and inappropriate use, returning a dismal record of success (see Kiechel, 1984 and Pietersen, 2002).

The dawning realisation in academic and management circles that the traditional approaches to strategy formation, premised on design, positioning, planning and control, were only appropriate under specific conditions, led to considerable attention being paid to the firm and resource based views of strategy by both academics and management. While new thinking in the fields of economics, industrial economics, psychology and sociology was mainly responsible for beginning this process of paradigm shift, Mintzberg and Waters (1985) observations on how *"strategy is formed"* and their identification of *"deliberate and emergent strategies"*, played a significant part in the shift in emphasis from traditional strategy to the firm based views of strategy. Mintzberg and Waters work drew a distinction between strategy that is realised as planned, and strategy that emerges spontaneously in response to environmental conditions and opportunities.

According to Kay (2000) the dominant view of strategy today is resource based theory. This contention takes a broad perspective of resource based theory and incorporates all aspects of firm based views of strategy. Kay (2000: p6) goes on to state that *"Strategy is not planning, visioning or forecasting – all remnants of the belief that one can control the future by superior insight and superior will. The modern subject of business strategy is a set of analytic techniques for understanding better, and so influencing, a company's position in its actual and potential marketplace."*

The view that understanding the operating conditions of the organisation, and influencing the organisations position in the market by facilitating configuration and leverage of the organisations' resources, is the cornerstone of firm based theory. This is reflected in the following articles, books and notes: Resource Based Theory of Competitive Advantage (Grant, 1991), Dynamic Capabilities and Strategic Management (Teece, Pisano and Shuen, 1997), the Learning Organisation Theories of Senge (1990) and others, the Core Competency and Strategic Intent approach of Hamel and Prahalad (1989 and 1994), Christensen (2002), and Quinn's Logical Incrementalism (1980a and 1980b).

While the environmental and the resource based views have dominated strategy in the last 40 years, Mintzberg *et al* (1998, p4) contend that there are, in fact, *"10 distinct points of view ... most of which are reflected in management practice. Each has a unique perspective that focuses ... on one major aspect of the strategy formation process. Each of these perspectives is, in one sense, narrow and overstated. Yet, in another sense, each is also interesting and insightful."* Mintzberg *et al* (1998) further state that the 10 points of view, or schools of thought, can be categorised as follows: three prescriptive schools (which correspond to the Environmental or Rational View), six descriptive schools (which all deal with aspects of the Firm Based View) and a configuration school which sees strategy as holistic and systemic and incorporating all the elements of the other nine schools.

What is particularly interesting about the comprehensive study of the literature and practice conducted by Mintzberg *et al* (1998) is that all 10 schools see the future environment in which organisations will operate in one or more of three ways:

1. The environment will be rational and its shape and characteristics can be determined by rigorous analysis (design, planning and positioning schools). The focus of strategy is external and the emphasis is on 'fit' between the external environment and the firm.
2. The shape and characteristics of the environment can be determined by a visionary process that is based on intuition, judgement and some analysis (entrepreneurial school and, to a lesser extent, the design school). The focus of strategy is primarily external but there is greater emphasis on firm resources than with a 'pure' application of the design, positioning and planning schools.
3. The uncertainty inherent in the environment is important only insofar as the firm is or is not able to adapt to it (the cognitive, learning, power, culture and environment schools). The focus of strategy is internal to the firm and the emphasis is on configuring the firm to evolve in accordance with shifting environmental conditions.

Based on the review conducted above there is evidence that the art and science of strategy formation in organisations reflects two dominant views: the Environmental View (prescription and planning) and the Firm Based View (emergence and learning).

These two views can be divided into 10 schools of thought, each providing a narrow but insightful perspective on strategy. It must be noted however, that there are a number of different perspectives, views and approaches to those described above, among them de Wit and Meyer (1998 and 2004) who have described strategy as a set of paradoxes, Mintzberg (1987) who defines strategy in five ways: as plan, ploy, pattern, position and perspective, and Porter (1980 and 1985) who sees strategy as positioning the firm for competitive advantage.

A distinction was not drawn between the environmental views of Chandler, Ansoff, Andrews, and the consulting practices of the 1970's and early 1980's and the firm based views of Penrose, Quinn and Wernerfeldt until 1985 when Mintzberg and Waters (1985) presented their paper on how strategy is realised. This shifted the emphasis of strategy and led to a decline in the rationalist, environmentally focused views and an 'explosion' of firm-based research in strategy and strategic management. Ultimately, the shift in emphasis precipitated and facilitated the development of the 'softer' disciplines, such as psychology, sociology and political science, within the strategy discipline.

3.5.2 Planned and Emergent Strategy

Kiechel (1984) refers to a study suggesting that only 10% of formulated or 'planned' strategies were ever implemented (a figure Tom Peters, of 'In Search of Excellence' fame, said was "wildly inflated!"), thereby suggesting that 90% of strategy came about by means other than the traditional planning process. This finding supported studies carried out by Mintzberg & Waters (1985) where planned strategies were referred to as 'intended strategies' which, theoretically, should have resulted in 'realised strategies'. It was found however, that realised strategies owed more to 'emergent strategy' than intended strategy. According to Mintzberg & Waters (1985) strategies emerge unintentionally as individuals and organisations take one step at a time in an attempt to find a viable course of action in a continually changing world. This leads to the emergence of patterns of action as individuals and organisations gradually learn and agree on a course of action.

de Wit and Meyer (1998: p150), in commenting on the findings of Mintzberg and Waters, refer to a *"paradox of deliberateness and emergentness"*, and conclude that the distinction between deliberate and emergent strategy goes to the heart of the debate on the topic of strategy formation in organisations. The crucial issue, according to de Wit and Meyer (1998: p151) is *"whether strategy formation should be more deliberate or more emergent. At the extremes of this debate, two radically opposite positions can be identified"*, one being *"the strategists who argue that organisations should strive to make strategy in a highly deliberate manner"* by *"explicitly formulating comprehensive plans and then implementing them"*, and strategists who argue that *"in reality, most new strategies emerge over time"* and organisations should *"facilitate this messy, fragmented, piecemeal formation process."* The first point of view is known as *"the Planning perspective"*, and the second point of view *"the Incrementalism perspective"*. The first point of view is rooted in 'traditional' strategy formation, or the environmental view of strategy, and the second point of view is rooted in firm based perspectives of strategy formation.

Quinn (1980b) provided some insight into the emergent strategy process with his concept of *"logical incrementalism"* where he described the process as follows: *"The real strategy tends to evolve as internal decisions and external events flow together to create a new, widely shared consensus for action among key members of the ... management team."* Quinn (1980b) also stated that *"In well run organisations, managers pro-actively guide these streams of actions and events incrementally towards conscious strategies ...."* Logical incrementalism suggests that strategy develops in small incremental steps, based on individual and organisational learning, as the strategist deals with complex and unforeseen change and evolution in the environment.

The above exposition on intended and emergent strategy creates the impression that strategy formulation only takes place in either an intended or an emergent fashion. In fact, Mintzberg and Waters (1985) found that intended and emergent strategies *"may be conceived as two ends of a continuum along which real-world strategies lie"* and empirical strategy is a hybrid of the 'pure' intended and the 'pure' emergent strategy.

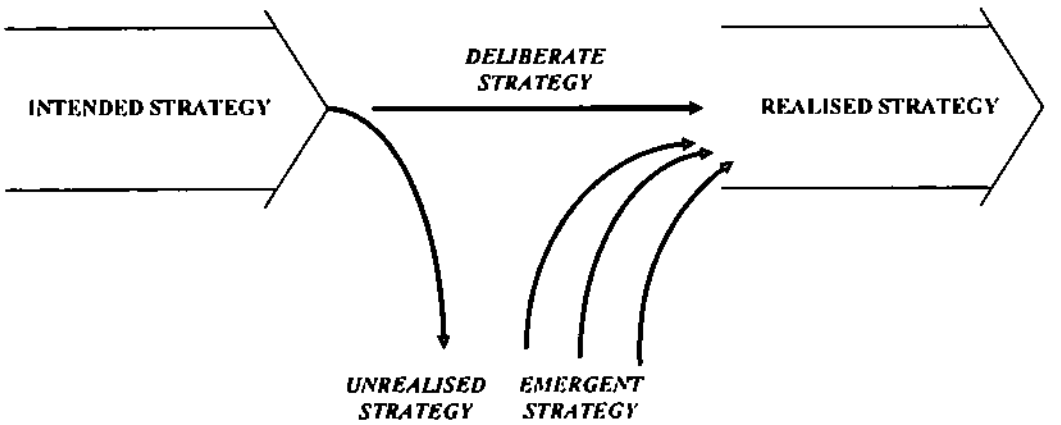


Figure 8: Deliberate and Emergent Strategy

Source: Mintzberg and Waters (1985). *Of Strategies, Deliberate and Emergent*. Extracted from the Strategic Management Journal, Vol. 6 pp257 – 272.

In order to illustrate their assertion that formulated strategy in the "real-world" is hybrid in nature, Mintzberg and Waters (1985) identified eight types of strategy that lie along the continuum:

1. The Planned Strategy

Planned strategy suggests clear and articulated intentions, formal controls to ensure that the intentions are realised, and an environment that is acquiescent. Leaders articulate their intentions in the form of a plan, elaborate this plan in as much detail as possible including budgets, and then control the implementation of the plan and budgets (Mintzberg, 1985).

In this environment the intention is to ensure agent discretion is pre-empted, surprises are minimised, and there is a minimum of distortion in policy guidelines, agent action and targeted outcomes. With planned strategy, it must be kept in mind that the plan is of no use *"if it cannot be applied as formulated in the environment surrounding the organisation so the planned strategy is found in an environment that is, if not benign or controllable, then at least rather predictable"* (Mintzberg and Waters, 1985: p259).

Some organisations are powerful enough to impose their plans on their environments and others are able to predict their environments with enough accuracy to pursue rather deliberate planned strategies. Mintzberg and Waters (1985: p259) are of the opinion, however, *"that many planned strategies are found in organisations that simply extrapolate established patterns in environments that they assume will remain stable."* Strategies *"appear not to be conceived in planning processes so much as elaborated from existing visions or copied from standard industry recipes."*

2. The Entrepreneurial Strategy

With entrepreneurial strategy the condition of precise articulated intentions is relaxed and one individual, in personal control of an organisation, is able to impose his or her vision and direction on it. This most commonly occurs in young and / or small organisations that are able to find relatively safe niches in their environments. In these organisations intentions are more difficult to identify and are less specific than those associated with planned strategy. In addition, there is less acceptance of these intentions by other actors in the organisation (Mintzberg and Waters, 1985).

The vision provides a general sense of direction and, within it, there is room for adaptation and evolution based on the individual and organisational learning that takes place. As a result, the "details of the vision" emerge as the organisation learns and acts and learns. It is often the case that as the organisation grows and becomes more formalised, the visions become the basis for planning and decisive changes are less in evidence (Mintzberg and Waters, 1985).

3. The Ideological Strategy

Vision can be collective as well as individual. According to Mintzberg and Waters (1985: p262) *"When the members of an organisation share a vision and identify so strongly with it that they pursue it as an ideology, then they are bound to exhibit patterns in their behaviour, so that clear realised strategies can be identified."* These are known as ideological strategies.

Since the ideology is likely to be overt and perhaps even articulated, intentions can usually be identified. Because the intentions exist as a vision, in whatever form, they can be adapted or changed, but it must be remembered that collective vision is far more immutable than individual vision. Ideology is culturally based and all who share it must agree to change their *"collective mind"*. The environment is unlikely to impose change because, after all, the purpose of ideology is to change the environment (Mintzberg and Waters, 1985). Ideological strategy would therefore be highly deliberate – probably more so than even planned strategy.

4. The Umbrella Strategy

Umbrella strategy relaxes the condition of tight control (bureaucratic, personal and ideological) over the actors in the organisation and, in some cases, over the environment as well. Leaders who have only partial control over other actors in an organisation often resort to what are known as umbrella strategies. Mintzberg and Waters (1985: p263) research indicated that leaders choosing the umbrella *strategy "set general guidelines for behaviour – define the boundaries – and then let other actors manoeuvre within them. In effect, these leaders establish kinds of umbrellas under which organisational actions are expected to fall"*.

"When an environment is complex, and perhaps somewhat uncontrollable and unpredictable as well, a variety of actors in the organisation must be able to respond to it." In other words, the patterns in organisational actions cannot be established deliberately in one central place although the boundaries may be established there to constrain them (Mintzberg and Waters, 1985:p263). From the perspective of the leaders in the organisation strategies are allowed to emerge within the boundaries of the umbrella strategy. As such, the umbrella strategy is deliberately emergent: intended at the centre in its broad remit but not in the specific details at the peripherals.

It must be pointed out that most real-world strategies have umbrella characteristics in that in no organisation can the central leadership totally pre-empt the discretion of others (as is assumed in the planned and entrepreneurial strategies), and in few organisations does a central leadership defer totally to others unless it has ceased to lead.

5. The Process Strategy

The process strategy is similar to the umbrella strategy in that it tends to emerge in an environment that is complex, uncontrollable and unpredictable, and organisational actors, other than the leadership, must have considerable discretion to determine outcomes (Mintzberg and Waters, 1985). Instead of trying to control strategy content at a general level, through boundaries or targets, it controls the process of strategy making while leaving the generation of strategy content to other organisational actors. In this situation *"the resulting behaviour would be deliberate in one respect and emergent in others: the central leadership designs the system that allows others the flexibility to evolve patterns within it"* (Mintzberg and Waters, 1985: p264).

6. The Unconnected Strategies

The unconnected strategy is straightforward – one part of the organisation with considerable discretion, as a result of it being loosely coupled to the rest of the organisation, *"is able to realise its own pattern in its stream of actions"* (Mintzberg and Waters, 1985: p265). Since these strategies come neither from a central leadership nor the organisation at large, they appear to be emergent from the perspective of the entire organisation, but they can be deliberate or emergent, dependant on the intention, from the perspective of the unit or individual involved. Such strategy often falls within the ambit of the Umbrella strategy but just as often falls outside of the Umbrella strategy, especially when strategy becomes clandestine or is the result of individual creative effort.

7. The Consensus Strategy

In the first six strategies the condition of prior intention biased them towards deliberate strategy but consensus strategy drops this condition and, as a result, is more clearly emergent. *"Here many different actors converge on the same theme, or pattern, so that it becomes pervasive in the organisation"* without any central direction or control (Mintzberg and Waters, 1985: p267). Unlike ideological strategy, in which consensus forms around a system of beliefs that reflect widely accepted intentions in the

organisation, the consensus strategy grows out of the *"mutual adjustment among different actors as they learn from each other and their various responses to the environment"*, and thereby find a common, and possibly unexpected pattern, that works for them.

The convergence is not driven by the intentions of central leadership, nor the prior intentions that are generally shared among the other actors, but simply evolves through the outcomes of a number of individual actions. As such, it derives more from collective action than from collective intention. It must be noted that when convergence is around a general theme rather than a specific action, the consensus will develop more slowly and will probably require a targeted intervention on the part of the actors to reach consensus (Mintzberg and Waters, 1985).

8. The Imposed Strategies

In each of the seven strategies described above, the environment has been considered benign or acquiescent, but strategy can be imposed from outside the organisation regardless of organisational intention or controls. This usually occurs when individuals or groups (e.g. shareholders, government or civil society) with considerable influence over the organisation *"impose a strategy on it"* (Mintzberg and Waters, 1985). In this situation the strategy is clearly deliberate but not by anyone in the organisation. However, given its inability to resist, the organisation has to resign itself to the pursuit of the strategy so that it becomes, in effect, deliberate. Sometimes the environment, rather than people, imposes strategies on organisations simply by severely restricting the options open to them. Many planned strategies seem to have this quality of determinism - they are pursued by organisations resigned to cooperating with external forces (Mintzberg and Waters, 1985).

Reality, however, seems to bring organisations closer to a compromise between determinism and free choice. *"Environments seldom pre-empt all choice, just as they seldom offer unlimited choice. That is why purely determined strategies are probably as rare as purely planned ones"* (Mintzberg and Waters, 1985: p268). Alternatively, just as the umbrella strategy may be the most realistic reflection of leadership intention, so too

might the partially imposed strategy be the most realistic reflection of environmental influence. As such, the environment bounds what the organisation can do, in effect determining under what part of the umbrella the organisation can feasibly operate.

The prescriptive (or traditional / environmental) schools of strategy formulation focus on control as a means to realising planned and intended strategy while emergent strategy emphasises learning as a means to realising strategy. As such, emergent strategy opens the door to strategic learning because it acknowledges the individual and organisational capacity, without the intervention of central actors or leadership, to identify opportunities and threats, experiment, reflect, act and evolve. In Mintzberg and Waters view (1985: p270), *"the fundamental difference between deliberate and emergent strategy is that whereas the former focuses on direction and control – getting desired things done – the latter opens up this notion of strategic learning. Defining strategy as intended and conceiving it as deliberate, as has traditionally been done, effectively precludes the notion of strategic learning. Emergent strategy itself implies learning that works."*

It must be remembered that emergent strategy does not mean chaos but unintended order, and it is also the means by which deliberate strategies change. As shown in *Figure 9: Strategic Learning*, the feedback loop added to the basic diagram, it is often through the identification of emergent strategies that leadership and other actors in the organisation come to change their intentions.

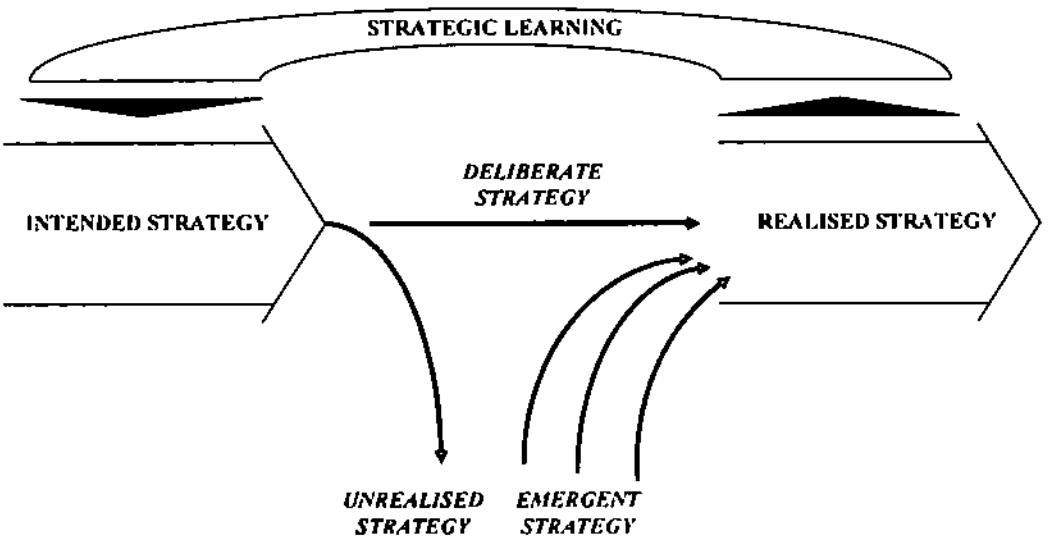


Figure 9: Strategic Learning

Adapted from: Mintzberg and Waters (1985) *Of Strategies, Deliberate and Emergent* Extracted from the Strategic Management Journal, Vol. 6 pp257 – 272.

Of course, unrealised strategies are also a source of learning, as leadership finds out which of their intentions do not work, rejected either by their organisations or else by environments that are less than acquiescent.

Mintzberg and Waters (1985: p271) place deliberate and emergent strategy in context: *"Emergent strategy does not have to mean that management is out of control, only – in some cases at least – that it is open, flexible and responsive, in other words, willing to learn. Such behaviour is especially important when an environment is too unstable or complex to comprehend, or too imposing to defy"*. Furthermore, *"whereas the more deliberate strategies tend to emphasise direction and hierarchy, the more emergent ones open the way for collective action and convergent behaviour."*

3.5.3 A Divergence in Emphasis: 2 Views of Strategy

For purposes of the argument presented in this thesis, it is necessary to note that the 'planned strategy' in Mintzberg and Waters (1985) article is synonymous with the rational or environmental view of strategy, or the prescriptive design, planning and positioning schools of Mintzberg *et al* (1998). Similarly, 'emergent strategy' draws on

the firm based perspectives of strategy or the six descriptive schools of Mintzberg *et al* (1998). This distinction facilitates the categorisation of perspectives, frameworks and methodologies on strategy into two broad streams of thought and establishes an approach that provides a foundation for analysis and synthesis of strategy and strategic management theory.

An analysis of the literature on strategy and the development of the strategy discipline (see section *1. Introduction* and section *3.5.1 Strategy: A Brief History*) clearly shows that a divergence in thought and perspective occurred in the late 1950's and early 1960's (see *Figure 10:* A Divergence in Emphasis). Interestingly the two primary streams of thought, the environmental view and firm based view, both had strong roots in economic theory, and their development was influenced by the prevailing business context at the time.

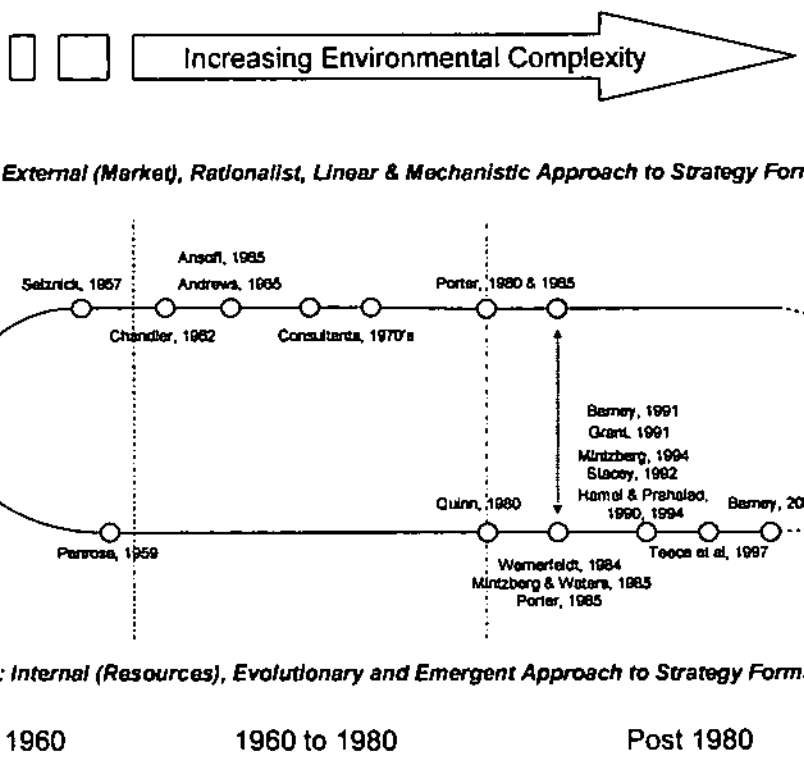


Figure 10: A Divergence in Emphasis – Two Streams of Thought on Strategy

The economic foundations of the environmental view lie in neo-classical economic theory which is dominated by equilibrium models, assumptions of perfect information and the objective rationality of decision makers in the organisation (Faulkner and Campbell, 2003), and the structure – conduct – performance model of industrial

organization economics (Pettigrew *et al*, 2002). In the world of the environmental view economic decisions are taken deterministically in response to economic drivers in the environment and not as a result of discretionary management judgement.

The firm and resource based views, on the other hand, are premised on the Ricardian approach to the determination of economic rent (Kay, 2000). Economic rent is the net value (total value less cost of capital) that a company adds through its resources and its resource configuration and is a measure of the competitive advantage that companies enjoy. A company's ability to sustain this competitive advantage is determined by its resources and capabilities and its ability to continually add value in the market.

This premise suggests that resources and capabilities are acquired and configured through a process of evolution, logical incrementalism and/or discretionary management judgement. This perspective moves strategy from the prescriptive environmental views of strategy formation to the descriptive firm based views that acknowledge the impact of complexity theory and systems theory, individual cognition, organisational culture and individual and organisational learning.

Initially the environmental view dominated the development of the strategy discipline through the contributions of Selznick (1957), Chandler (1962) and Kenneth Andrews (1971) who, in 1965 with the General Management Group at the Harvard Business School, established this perspective as one of the most influential views of the strategy formation process with the introduction of the SWOT Analysis. The momentum for the environmental view grew with the rise of the strategy consultancies (BCG and McKinsey specifically) and seemed to peak with the publication of Michael Porter's *Competitive Strategy* in 1980.

While the general context of business in the late 1950's, 1960's and much of the 1970's was relatively stable and predictable the environmental approach was relevant. In fact, the environmental approach is still relevant today where conditions are stable and predictable. However, the accumulation of information and knowledge, an increasingly global economy, and greater interaction between different cultures, economies and worldviews came to a head during the 1970's. Suddenly there were oil crises, an

exponential increase in information flows, many new communication technologies, the revolutionary impact of chip technologies and the personal computer. This brought huge complexity and instability to the environment and the foundations of neo-classical economic theory and, as a result, strategy theory were shaken.

After Penrose wrote "*The Theory of the Growth of the Firm*" in 1959, firm and resource based views of strategy went into hiatus. In the 1960's and 1970's there were explorations of firm based theories in the fields of psychology (especially cognition), sociology, organisational dynamics, politics and decision making, but they were lost in the frenetic activity around the design, planning and positioning perspectives of strategy formation and implementation. By 1980 disenchantment with these perspectives was growing as the world became increasingly complex and the environmental view became less relevant and less successful.

In 1980 Quinn introduced the concept of "logical incrementalism", which built on observations of "incremental behaviour" in organisations from the research of other scholars, and this gave increased credibility to firm based views of strategy. Perhaps the final turning point came with the publication of Wernerfeldt's article in 1984 where, building on Penrose' (1959) theory of the firm, he provided a concise but comprehensive view of resource based theory.

This seemed to precipitate a flood of research and publication on firm based theories of strategy including Porter (1985), Grant (1991), Barney (1991), Mintzberg and Waters (1985), Hamel and Prahalad (1989 and 1994) and Prahalad and Hamel (1990) while research and publication on the environmental view seemed to dry up with Porter's "*Competitive Advantage*" (1985) which took an activity based perspective on the firm (the Value Chain) but situated the firm in an industry value stream where competitive advantage can be generated and generic strategies applied. As such, Porter seems to be straddling both the environmental and firm based views of strategy – a point that has been graphically depicted in *Figure 10* above.

As is clear from the above, the historical development of strategy and strategic management theory followed two divergent streams of thought – an environmentally

focused view and a firm based view. This is supported by the assertions of many authors, including Selznick (1957), Chandler (1962), Andrews (1971), Pettigrew *et al* (2002), Leibold, Probst and Gibbert (2002) and de Wit and Meyer (2004), that strategy seeks to align the internal activities of the firm with the external demands of the environment in which the firm operates. This strongly suggests a separation in thinking on these two domains.

Furthermore, Mintzberg *et al* (1998) divide strategy into 10 schools of which 3 were prescriptive and corresponded with the environmental view, 6 were descriptive and corresponded with the firm based views, and the 10th school sought to bring the prescriptive and descriptive streams together. Mintzberg and Waters (1985) noted that strategy is realised as planned (the environmental perspectives) or it is emergent (the firm based perspectives). de Wit and Meyer (2004) refer to a paradox of deliberateness and emergence, Stacey (2003) labels the environmental, or rationalist, strategy approaches as strategic choice theory and contrasts this theory with complex responsive processes which are rooted in firm based views of strategy, and Johnson and Scholes (2002) suggest that the strategic position of the company can be analysed from an environmental perspective and a strategic capability perspective which is rooted in the firm. The balance of this literature review therefore treats these two streams of thought as separate in order to provide a framework for analysis of the various perspectives on strategy and strategic management.

3.6 Environmental Views of Strategy

The environmental view of strategy was born out of the 'Machine Age' and the Newtonian view of the universe, and has been heavily influenced by military and micro-economic thinking, the theories of industrial organisation economics, and the principles of behavioural psychology. The earliest proponents of the environmental view were the military-political strategists and writers, the better known being Sun Tzu, Machiavelli, Napoleon, Mao Tse-Tung, Lenin, Montgomery and Von Clausewitz, but the environmental view began to take shape in the organisational and business context with the publication of two books:

- Selznick's "*Leadership in Administration*" in 1957, which introduced the concepts of "*distinctive competence*" (1957, pp42-56) and "*strategic fit*", and suggests that it is essential to align the organisations "*internal state*" with its "*external expectations*" (1957, pp67-74), and
- Chandler's 1962 book titled "*Strategy and Structure*" in which he proposed that structure follows strategy and positioned strategy as a separate business function that is deliberate and iterative.

However, it was not until 1965 when Andrews, together with the General Management Group at the Harvard Business School, introduced the SWOT Analysis and precipitated the rise of the design school of strategy, and Ansoff published his book "*Corporate Strategy*", that strategy became entrenched as a formal function within organisations. Ansoff's contribution initiated the establishment of the planning school of strategy which saw strategy as a planning process that drew heavily on the principles of the design school.

While the SWOT Analysis has become the foundation stone for most strategy analysis, in that it is concerned with the evaluation of both the external and internal environments, the emphasis within the Environmental View is on the opportunities and threats side of the analysis. The environment drives the development of the organisation which leverages resources and develops structure and processes, within the context of the environment, that emphasize identified strengths and eliminate identified weaknesses.

Andrews (2003: p74) defines the environment of an organisation as "*the pattern of all the external conditions and influences that affect its*", the organisations', "*life and development*". These are the technological, economic, social and political conditions, the market and competitive conditions within the industry, the total business community, the organisations city, country and the world. Andrews goes on to say that *"in all these categories change is taking place at various rates – fastest in technology, less rapidly in politics."*

In the environmental view the organisations environment is subjected to analysis the outcome of which is extrapolated into the future to provide a premise on which to build the organisation and plan its development trajectory. The key concept is one of the organisations' strategic 'fit' (see *Figure 11: The Notion of Fit as a Strategic Concept*) or congruence with its operating environment (Selznick, 1957; Andrews, 1980; Mintzberg *et al*, 1998). According to Tidd *et al* (2001), strategy in this view *"consists of the following steps: (1) describe, understand and analyse the environment; (2) determine a course of action in the light of the analysis; (3) carry out the decided course of action. This is a 'linear model' of rational action: appraise, determine and act"* hence Tidd *et al* (2001) describing the environmental view of strategy as "*Rationalist*" strategy.

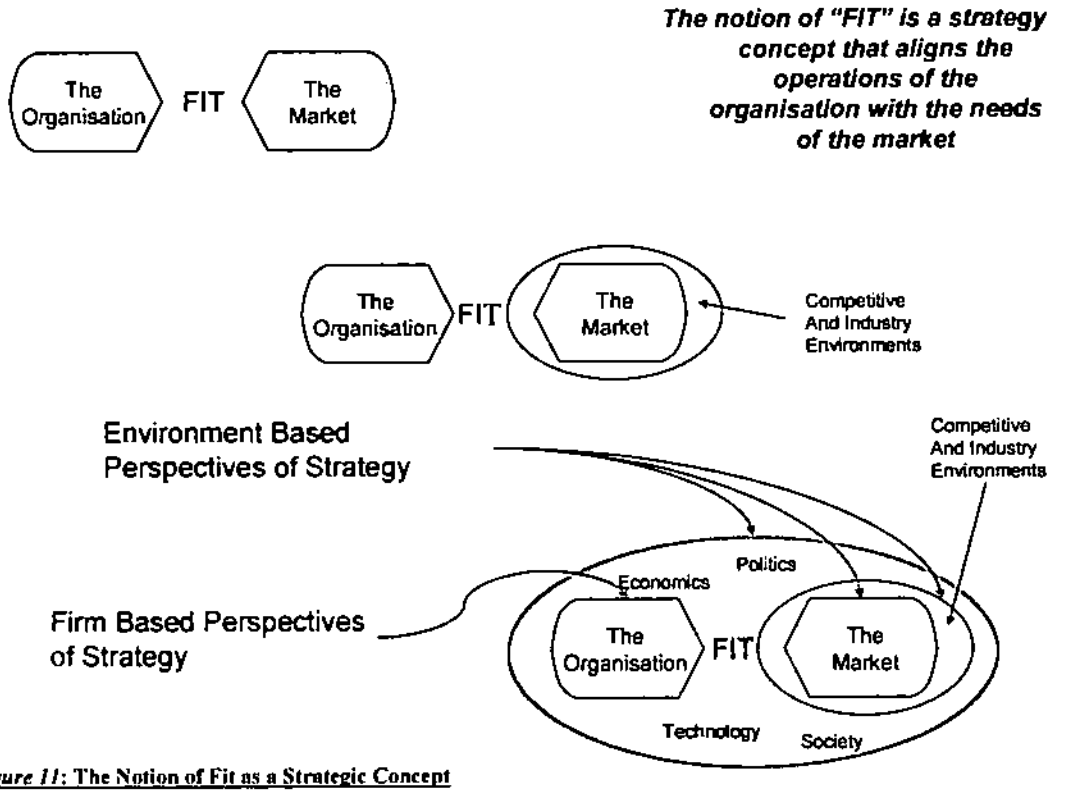


Figure 11: The Notion of Fit as a Strategic Concept

The design, planning and positioning schools which, according to Mintzberg *et al* (1998) are the three schools that make up the environmental views of strategy, have a number of characteristics in common:

- The schools are prescriptive in nature, that is, they are more concerned with "*how strategies 'should' be formulated than how they necessarily 'do' form*" Mintzberg *et al* (1998: pp5-7).

- Strategy formation is perceived as a controlled, conscious process that produces full-blown and deliberate strategies for formal implementation.
- Strategies are based on extensive analyses that use existing data (current and historic) to predict a future state for which strategy is formulated and implemented.
- The strategies are premised on a high degree of certainty about the future / projected environmental conditions (Stacy, 2000: p83).
- Strategy, and the resultant organisational change, is the realisation of individually formed prior intention (Stacey, 2000: p83). Generally, this intention is formed at the executive (usually CEO) level and is cascaded down the organisation as the strategies become plans and the plans are implemented.

All three schools adopt an objectively rational, sequential and calculating approach as a solution to dealing with the difficulties of choosing strategy in conditions of uncertainty and conflict. But this does not reflect the reality that organisations face in their everyday existence. The operating environment is, as a result of the interaction of people (as individuals and in an organisational context), social and political systems, uncertain and unpredictable and subject to the principles of complexity theory. This reality leads to a number of criticisms of each of the three schools of strategic thought (Mintzberg *et al*, 1998 and Stacey, 2003) that will be specifically dealt with in the analysis of each school in *sections 3.6.1 – 3.6.3* below.

However, the biggest problem that confronts all three schools is that the schools favour systems and process over people, and this compromises the richness of the strategies that are formulated (Stacey, 2000 and 2003). As such, there is a process of thought that is independent of action and strategic learning is therefore not factored into the strategy formulations. If we extend this argument it suggests that future strategic change brought about by discontinuities, and based on what is still to be learnt from these discontinuities, is ignored when formulating strategy.

3.6.1 Strategy as Conceptualising

The perception of strategy as a conceptual process is captured in what Mintzberg *et al* call the design school of strategy formation. Mintzberg *et al* (1998: p24) are of the

opinion that this school is "*the most influential view of the strategy formation process*" both from an academic as well as an empirical perspective. In essence, this school "*seeks to attain a match, or fit, between internal capabilities and external possibilities*" or, in the words of Selznick (1957: pp67-74), strives to meet the need to bring together the organisation's "*internal state*" with its "*external expectations*".

While Selznick (1957) and Chandler (1962) contributed extensively to the development of the design school, Selznick with his concept of 'fit' and Chandler with his examination of the relationship between strategy and structure, it was the General Management Group at Harvard Business School (Learned, Christensen, Andrews and Guth, 1965) that provided the momentum for the development of this school into the predominant theory of strategy formation. A portion of this text, attributed to Andrews and incorporated into his book "*The Concept of Corporate Strategy*" in 1971, places primary emphasis on the appraisal of the external and internal (firm) environments, with the external environment being the source of opportunities and threats and the internal environment yielding strengths and weaknesses. Out of this appraisal it is possible to identify the key success factors in the environment and the distinctive competencies of the firm, and this leads to the creation of strategy (in the form of strategic options) which are then subjected to evaluation and choice.

For Andrews (1965 and 1971), an important element of both the creation of strategy and the evaluation of the resultant strategic options is the application of social responsibility and managerial values to the creative process - the process that generates the strategic options. However, while Andrews considers social responsibility and managerial values to be essential input in applying the SWOT model, a view shared by Selznick (1957), not many other authors associated with the design school share this view. This was noted by Mintzberg *et al* (1998: p27) who stated: "*On the actual generation of strategies, little has been written in this school besides an emphasis on this being a 'creative act'*".

According to Andrews (1980) and Christensen, Andrews, Bower, Hamermesh and Porter (1982), there are a number of basic premises on which the design schools rests, amongst them are:

- *Strategy formation should be a deliberate process of conscious thought.* Action flows from reason and effective strategies are derived from a controlled process of thinking. In its nature this premise is prescriptive and implies an objectively rational process of thought that will result in the creation of strategy.
- *Responsibility for the consciousness, and control of that consciousness, rests with the Chief Executive Officer, and that person is the strategist.* This suggests that, according to Hayes (1985: p117), "*this 'command and control' mentality allocates all major decisions to top management, which imposes them on the organization and monitors them through elaborate planning, budgeting and control systems*". The effect of this premise is to relegate other members of the organisation to an irrelevant or subordinate role in strategy formation thereby excluding the possibility of input from actors that are interfacing at an operational level with the environment. In fact, this relegates the environment to an inconsequential role where its existence and impact is noted but with which there is little or no interaction.
- *The model of strategy formation must be kept simple and informal.* Andrews' concern here is that elaboration and formality will detract from, or compromise, the act of creation that is strategy formation. Mintzberg *et al* (1998: p31) observed that this forced Andrews to "*tread a fine line*" between "*nonconscious intuition*" on one hand and "*formal analysis*" on the other – a position Andrews characterised as "*an act of judgement*".
- *Strategies should be one of a kind: the best ones result from a process of individualized design.* The implication here is that strategy is formed for a specific situation and not a system of general variables thereby limiting the application of the strategy in other situations. Mintzberg *et al* (1998) note that the design school has little to say about the content of strategies but, instead, focuses on the process by which the strategies are formed.
- *The design process is complete when strategies appear fully formulated as perspective.* This makes very little provision for incremental or emergent strategies that arise through the process of implementation and, in the words of Mintzberg *et al* (1998: p32) here "*we find not a Darwinian view of strategy formation, but the Biblical version, with strategy as the grand conception, the ultimate choice*". Given what we know of systems thinking, complexity theory, cognition and the

shortcomings of objective rationality ('bounded rationality') this is a high risk approach.

- *The strategies have to be explicit and simple* so that they can be clearly articulated and understood by other members of the organisation and, once they have been fully formed, they can then be implemented. As such, a clear distinction is made between the formulation of strategies and their implementation.

According to Mintzberg *et al* (1998: p32) this approach is "*consistent with classical notions of rationality – diagnosis followed by prescription and then action – the design school clearly separates thinking from acting. Central to this distinction is the associated premise that structure must follow strategy.*" According to Andrews in Christensen *et al* (1982: p551) "*until we know the strategy we cannot begin to specify the appropriate structure*". This assertion ignores certain empirically observed aspects of strategy formation in organisations:

- The impact of incremental development and emergent strategy,
- The influence of existing structure on strategy, and
- The participation of organisational actors other than the executive such as those actors at the client interface and within day-to-day operations.

Rumelt (2003: p80), in building on the body of knowledge associated with the design school, proposed that the evaluation of the strategic options that arise through the SWOT (strengths, weaknesses, opportunities and threats) analysis must include, and pass, four tests before being considered acceptable:

- *Consistency.* The strategy must be consistent with the goals and policies of the organisation.
- *Consonance.* The strategy must provide a suitable response to the demands of the external environment and must be sufficiently adaptable to provide for the ongoing change that characterises today's environmental contexts.
- *Advantage.* The strategy must provide some form of competitive advantage in the market the organisation seeks to address.

- *Feasibility*. The organisation must have the resources available, or can acquire the resources necessary, to deliver on the strategy. Furthermore, the strategy should not create new problems.

Rumelt is one of a very large body of academics and practitioners who built the design school of strategy formation into the still highly influential perspective it is today. While a number of problems associated with this school have been noted, it must also be remembered that the design school is one of a number of perspectives, each with its own problems, that provides a framework for the process of strategy formation that is relevant in specific contexts. Currently, given the degree of fragmentation of strategy theory, no perspective or framework exists that covers all contexts – each is only suitable for specific contexts.

Given the above caveat, it is interesting to note Mintzberg's *et al* (1998) views on the problems associated with the design school perspective:

- The approach promotes thought that is independent of action - strategy formation is about conceiving rather than learning, and opportunities, threats, strengths and weaknesses are identified by a process of consideration, assessment and judgement that is supported by analysis rather than by experience.
- There is a separation of formulation from implementation – thinking is detached from acting. Managers formulate so that others can implement and this encourages *"superficial strategies that violate the very distinctive competencies of the organisation"* (Mintzberg *et al*, 1998: p37). This approach is premised on the assumptions that managers have all relevant information available to them when they form strategy, that the information is complete and distortion free, and that the external environment is stable or predictable so that formed or intended strategies will be realised as planned.
- Making strategy explicit promotes inflexibility and limits the potential for addressing opportunities that may arise in the future. The focus is on the realisation of planned strategy, and strategy emergence through experience and learning is inhibited.
- Sometimes structure follows strategy; sometimes it is responsible for the development of strategy. *"Claiming that strategy must take precedence over*

structure amounts to claiming that strategy must take precedence over the established capabilities of the organisation, which are embedded in its structure" (Mintzberg *et al*, 1998: p35).

To the list of concerns noted by Mintzberg *et al*, there must be added a concern about the rationality of the choice that is made between the alternative strategies. Once strategies are created, and the assumption is that there are several alternative strategies, they are considered to be options for evaluation and choice. However, the model moves from choice to implementation without considering the process associated with making this choice.

Given the neo-classical economic roots of this school it is assumed that the final choice of which strategy to adopt will be the result of an objectively rational decision – in line with the approach and prescriptive nature of the design school. But, as we have seen above, rationality is 'bounded' (Simon, 1955, 1956 and 1997) and subjective (Jackson and Carter, 2000), and will be biased by the cognitive maps the creator of the strategy carries around in his or her head. The quality of the decision will also be bounded by the information that is available and the degree of knowledge and understanding of the organisation and its external environment that the decision maker possesses. When this is considered in conjunction with the problems associated with the design school that were identified above, Kiechel's (1984) contention that only 10% of intended strategies are ever realised is completely understandable.

3.6.2 Strategy as Planning

The planning school came into existence shortly after the rise to prominence of the design school and drew on many of the concepts that became the academic and empirical premise of the design school. Its genesis was probably Ansoff's book "*Corporate Strategy*" (1965: pp10and25) which advanced the perspective that 'scientific' management was not wholly applicable to the strategic problem and, drawing on the work of Simon (1960), showed that "*the solution of any decision problem in business, science, or art can be viewed in four steps:*

1. *Perception of decision need or opportunity,*

2. *Formulation of alternative courses of action,*
3. *Evaluation of the alternatives for their respective contributions,*
4. *Choice of one or more of the alternatives for implementation.*"

To Ansoff, these four steps provided a starting point for the development of a solution to deal with strategic problems in organisations. Ultimately, Ansoff arrived at the conclusion that a formal, rational and structured planning process was the answer for developing strategy and guiding the decision making process. Of particular importance in Ansoff's approach is that Ansoff 'sees' strategy and decision making as 'two sides of the same coin'. In this regard, Ansoff (1965: p17) writes: "*the overall problem of the business of the firm is to configure and direct the resource-conversion process in such a way as to optimize the attainment of the firm's objectives. Since this calls for a great many distinct and different decisions, a study of the overall decision process can be facilitated by dividing the total decision space into distinct categories*" namely "*strategic, administrative, and operating*" decision making processes.

The rise of the planning school was accompanied by the publication of, literally, thousands of journals, books and articles during the 1970's and 1980's, each extolling the virtues of 'formal' strategic planning. As a result the school initially grew to have an enormous impact on the practice of strategic management but today it "*casts barely a pale shadow of its former influence*" (Mintzberg, 1998: p48). There are many reasons for the planning schools decline including decreasing relevance in an increasingly unstable environment, inappropriate assumptions about the predictability of context and the rationality of individuals, and the fact that the planning school literature experienced dramatic quantitative growth but qualitatively it hardly grew at all.

Ansoff and the planning school, while drawing on many of the concepts that characterised the design school, differentiated their perspective from Selznick, Chandler and Andrews by building a strategic planning model around the SWOT Analysis, or variations of the SWOT Analysis. The planning model, in essence, divided SWOT "*into neatly delineated steps, articulated each of these with lots of checklists and techniques, and gave special attention to the setting of objectives on the front end and the elaboration of budgets and operating plans on the back end*" (Mintzberg et al, 1998:

p49). This approach is still used extensively today, especially by strategy consulting organisations, and is based on a set of forecasts or predictions about the future which are then used to 'prepare' the organisation to capitalise on future opportunities and meet the demands of the future environment.

The planning models take many forms and include the better known models such as the Steiner Model of Strategic Planning (Steiner, 1969 and 1979) which even included an initial planning step titled 'plan to plan', the Stanford Research Institute's 'System of Plans' (Stewart, 1963), The Annual Planning Cycle (Rothschild, 1980) and the Four Planning Hierarchies (Mintzberg, 1994). These models are supplemented my many other planning frameworks and methodologies, especially those produced by strategy consulting practices, but all follow a similar process which includes a statement of objectives and a list of activities that, it is hoped, will result in the achievement of the objectives. Generally the objectives and activities are 'guided' by strategy that is informed by the application of frameworks and analytic tools drawn primarily from the design and positioning schools of strategy formation.

According to Mintzberg *et al* (1998) the planning school accepted most of the premises of the design school but for two critical differences. Firstly, while the basic model was the same, its execution in the planning school was highly formal – at its extreme, very linear and mechanistic in its application. The simple and informal model of the design school became an elaborated sequence of steps in the planning school which are premised on a machine assumption: "*produce each of the component parts as specified, assemble them according to the blueprint, and the end product (strategy) will result*" (Mintzberg *et al*, 1998: p57). This stands in stark contrast to the 'act of creation' that is fundamental to the design school of strategy formation. Secondly, while in principle the CEO remains the chief architect of strategy, in practice the CEO is not so much an architect as an endorser of the strategies formulated by planners and consultants.

According to Mintzberg *et al* (1998), the three basic premises of the planning school are:

- Strategies are the result of a controlled and conscious process of formal planning that is decomposed into distinct steps or activities that are each delineated by checklists and supported by frameworks and tools.
- Responsibility for the process vests in the CEO (in principle) but responsibility for the execution of the process vests in general management and planners.
- Strategies manifest from this process fully formed and ready to be made explicit so that they can be implemented through detailed activities that will achieve the objectives by careful attention to operating plans, budgets and programs.

In addition to many of the problems associated with the design school, from which the planning school inherited much of its theoretical foundation, the planning school is premised on four fallacies that seriously undermine its validity (Mintzberg *et al,* 1998: pp66-77):

- *The Fallacy of Predetermination*: *To engage in strategic planning an organisation must be able to predict the course of its environment, to control it, or simply to assume its stability. Otherwise, it makes no sense to set the inflexible course of action that constitutes a strategic plan."* While certain patterns and trends may be predictable, the forecasting of discontinuities, such as technological breakthroughs, wars, political shifts, social shifts or, mundanely, price increases, is practically impossible.
- *The Fallacy of Detachment*: Very seldom is management intimately involved in the operational processes or immersed in the details of the task. This lack of involvement means that a whole body of strategic insight is obtained second hand, or ignored, since most strategy is formulated at an executive / CEO level.
- *The Fallacy of Formalisation*: Can an institutionalised process produce the data, the analysis and the synthesis necessary to produce the best strategy? Probably not – the bounded nature of the approach would narrow the strategic vision of the planner. The planning approach eliminates and / or ignores the flashes of insight and entrepreneurial genius that reshapes or creates industries.
- *The Grand Fallacy of 'Strategic Planning'*: *"Because analysis is not synthesis, strategic planning has never been strategy making. Analysis may precede and support synthesis, by providing certain necessary inputs. Analysis may follow and elaborate synthesis, by decomposing and formalizing its consequences. But analysis*

cannot substitute for synthesis. No amount of elaboration will ever enable formal procedures to forecast discontinuities, to inform detached managers, to create novel strategies. Thus planning, rather than providing new strategies, could not proceed without their prior existence" Mintzberg *et al* (1998: p77).

As such, strategic planning should have been called strategic programming, and it should have been presented as a process that formalizes, wherever necessary, the consequences of strategies that are already formed by other means.

In summary, through the 1960's and until the late 1970's, there were two dominant schools of thought on strategy formation in organisations:

- Those who saw strategy as an informal process of formulation ('an act of creation') and implementation based on generating competitive advantage through congruence and fit with the environment (the design school), and
- Those who saw strategy as a formal, mechanistic process of analysis based on an environmental assessment and resulting in a detailed plan that consisted of objectives, strategies and programs, and detailed budgets and activities (The planning school).

By 1980 it became apparent that the development of strategy theory had stalled, and the accepted approaches to the analysis of the external operating environment were no longer adequate given the broad based challenges facing firms and industries. According to Mintzberg *et al* (1998), the analysis of a firm's competitive environment was not well structured and the traditional analysis of the opportunities and threats facing firms was no longer sufficient to provide a foundation on which to build competitive strategy. The economic climate was therefore perfect for the introduction of the third prescriptive school of strategy: the positioning school.

3.6.3 Strategy as Positioning

According to Mintzberg *et al* (1998), Michael Porter (1980 and 1985) was primarily responsible for the introduction and development of a third school of thought known as the positioning school. This school had its roots mainly in industrial organisation economics and military history, and sought to position organisations for competitive advantage in accordance with a set of Generic Strategies. Industry and Competitor

Analysis frameworks and Value Chains are used as tools to analyse an organisations position and provide a foundation for the application of Generic Strategy theory. The positioning school rose to prominence on the back of rigorous and well grounded theory and is still pre-eminent and highly influential in strategic thinking today.

Porter's theories were premised on his background in economics and industrial organisation but included and built on the work of, *inter alia*, A.D Chandler (1962), P. Selznick (1957), K.R. Andrews (1965), and C.R. Christensen (1965) who saw strategy as 'fit' between the external and internal environments of the organisation, and the work of Ansoff (1965) who viewed planning processes as the basis of strategy formulation and implementation. The maxims of the military strategists Sun Tzu and Von Clausewitz also played a substantial role in shaping Porter's thinking.

According to Barney (2002: Preface xiii), Porter *"adapted concepts from industrial organisation economics to the analysis of threats and opportunities in a firm's competitive environment. Before Porter, the analysis of a firm's competitive environment was not well structured and involved generating long idiosyncratic lists of threats and opportunities facing a firm. After Porter, the critical threats in a firm's environment, as derived from industrial organisation economics, could be described and opportunities facing a firm could be deduced from the structure of a firm's industry."* Porter had laid the foundation of a theoretical structure for analysing one critical component of the strategy formulation problem - the external operating environment of organisations.

Porter's Competitive Analysis, Industry Analysis, Generic Strategies and Value Chain framework were supplemented at the time by the development of a number of consulting company perspectives and initiatives such as PIMS and the Boston Consulting Group's Experience Curve, Growth Share Matrix and Portfolio Analysis Matrix, and reflected a need in the early 1980's to supplement the body of strategic thought that prevailed at the time (Mintzberg *et al*, 1998: pp81-122). Essentially, the positioning school provided a theoretical foundation for the development of strategy content to what had been, up to the beginning of the 1980's, theories and frameworks for the process of strategy analysis and formulation.

However, in accordance with the approach of the design and planning schools, strategy formation continued to be perceived as a conscious and controlled process that delivers deliberate and fully formed strategies for articulation and implementation. In the positioning school the process is narrower than in the other two prescriptive schools in that it focuses on analysis and calculation and the production of generic strategies rather than the development of unique strategies (the design school) or the specification of plans (the planning schools) (Mintzberg *et al*, 1998; Stacey 2003; de Wit and Meyer, 2004).

According to Mintzberg (1998: p82-83), the positioning school did not represent a radical departure from the premises of the design or planning schools except in two areas:

- Firstly, the focus of the positioning school is on content in juxtaposition to the design and planning schools which focuses on the process of strategy formation.
- Secondly, both the design and planning schools "*put no limits on the strategies that were possible in any given situation*". The positioning school, in contrast, argues that "*only a few key strategies – as positions in the economic marketplace – are desirable in any given industry: ones that can be defended against existing and future competitors*". The logic underlying this assertion leads one to conclude that firms occupying a defensible position will enjoy higher profits than other firms in the same industry.

In dispensing with the fundamental requirement of the design and planning schools, that "*strategies have to be unique and tailor-made for each organisation*", the positioning school elevated the prescriptive approach to strategy formation to a new level by creating a set of analytical tools that allows an organisation to develop generic strategy content, in the form of cost, differentiation or focus leadership, that matches strategy with the situation that confronts the organisation.

Given this background, the critical premises of the positioning perspective can be summarised in five points (see Mintzberg *et al*, 1998 and Porter 1980, 1985):

1. The marketplace is economic and competitive.
2. Strategies are generic, common and identifiable positions in the marketplace.

3. The strategy formation process is one of selection of generic positions based on analyses which are used by managers to make strategic choices.
4. Analysts play a major role in the process of strategy formation providing the results of the analysis, often in the form of strategic options, to managers who make the decision on which option, or options, to choose.
5. The product of this process is a fully formed strategy which is then articulated and implemented: in effect, the market and its structure drives deliberate strategies that drive organisational structure.

The fifth point is common to all three perspectives in the rational or environmental school of strategy formation and reflects the prescriptive and linear approach to strategy formation that is characteristic of these schools.

In the positioning school the predispositions of the design school and planning school are retained and many of the concerns regarding these three schools are the same. In essence, the separation of thinking from acting can make the strategy formation process "*excessively deliberate and so undermine strategic learning*" and, as discussed in the analysis of the planning school, "*looking to the future by extrapolating the trends of the present*" in complex environments can be tantamount to economic suicide. For Mintzberg *et al* (1998: pp 112-115), "*the message of the positioning school is not to get out there and learn, but to stay home and calculate.*" The strategist deals with "*abstractions on paper, detached from the tangible world of making products and closing sales.*"

The positioning school also carries a number of specific orientations and biases that tend to narrow the school's perspective and the application of the principles of the school in different contexts. According to Mintzberg *et al* (1998: p113) and Stacey (2003), it is orientated towards the quantifiable and the economic and does not even consider the qualitative or the social and political domains of our daily existence. Furthermore, the school is biased towards "*traditional big business ... where market power is greatest, competition least effective, and the potential for political manipulation most pronounced*". This bias towards "*the big, the established and the mature*" also reflects a bias towards conditions of stability (as in the design and planning schools) a condition that is rare in an increasingly complex business environment. Mintzberg *et al* (1998)

conclude that strategy formulation in the prescriptive schools is most appropriate where conditions are sufficiently established and stable.

Perhaps the biggest concern with the positioning school is that strategies are conceived as generic positions and are not unique or specific to an organisations situation. Strategy is about perspective and this leads to creative strategic behaviour when vision, insight, intuition and diversity are added to the process. Suggesting that all strategy can be categorised in three boxes (cost, focus and differentiation) based on analytical frameworks, and that this will result in a successful set of generic activities, is a very narrow perspective on any organisations strategic options.

In conclusion, a particularly pertinent observation by Mintzberg *et al* (1998: p100) is that Porter took "*the basic approach of the Design School and applied it to the external, or industry, environment*". According to Mintzberg *et al*, this eventually "*gave rise to a countermovement, based on the internal situation, called the resource-based view of the firm*". This can be clearly seen in "*Figure 10:* A Divergence in Emphasis" above, where theory building in the environmental or prescriptive views of strategy started to decline rapidly after 1980 and the firm based theories of strategy formation, especially the resource based perspective, began their rise to prominence.

3.7 Firm Based Views of Strategy

The resource based view of strategy is synonymous with the 'incrementalist strategy' of Tidd *et al* (2001), the six 'descriptive schools' of strategic thought (Mintzberg *et al*, 1998), the 'incrementalism perspective' of de Wit and Meyer (1998), and incorporates the concepts of the 'complex responsive process' of Stacey (2000 and 2003), the 'complex adaptive system' theory of, *inter alia*, Lewin and Regine (2000), Wheatley (1999), Capra (2002), the concepts of 'logical incrementalism' (Quinn,1980b) and 'dynamic capabilities' (Teece, Pisano and Shuen, 1997), and the core competencies approach of Hamel and Prahalad (1994).

According to Grant (1991: p114) *"Strategy has been defined as the match an organisation makes between its internal resources and skills ... and the opportunities*

and risks created by its external environment. During the 1980s, the principal developments in strategy analysis focused upon the link between strategy and the external environment. Prominent examples of this focus are Michael Porter's analysis of industry structure and competitive positioning and the empirical studies undertaken by the PIMS project." In contrast, Grant (1991) contends, the link between strategy and the firm's resources and capabilities has suffered comparative neglect. Most research into the strategic implications of the firm's internal environment has been concerned with issues of strategy implementation and the analysis of the organisational processes through which strategies emerge. While there can be few arguments with Grant's assertions, his perspective has to be seen in the light of the environmental context of the last 30 years of the 20th century.

As environmental complexity increased during the 1970s and 1980s the prediction of future operating conditions became difficult and the achievement of organisational objectives through the accepted methods of planning and control were rare. Stacey (2000) provides some insight into this phenomenon by drawing a distinction between the simple environment in which organisations operated in the first half of the 20th century and the increasingly complex environment of the last half of the 20th century. As we will see in the work of Courtney, Kirkland and Viguerie (1997) (see *section 4.1.2 Stability, Complexity and Everything In-between)*, the environmental approach is very effective in conditions of stability, but unstable and complex environments require a degree of adaptability that is not provided by the linear planning and control approach.

According to Stacey (2003), complex systems are characterised by nonlinear relationships with positive and negative feedback loops, and the links between cause and effect are distant in time and space. In this environment, a single stimulus can produce multiple results some of which will be unexpected and counter-intuitive, and change is rapid, unpredictable and apparently random. Pietersen (2002: p48) argues, *"in this kind of nonlinear world, characterised more by discontinuities than by incremental changes, it's almost impossible to forecast the future correctly"*. Rigid adherence to the planning and control approach in a complex environment would therefore be 'organisational suicide' and, according to Stacey (2000, 2003) and the complexity theorists, in such environments successful organisations adapt to the future as it occurs.

The problems associated with increasing environmental complexity and discontinuities led to a growing disquiet in academic and management circles that the traditional approaches to strategy formulation (premised on design, positioning, planning and control) were only appropriate under specific conditions, and there was also another mechanism, which facilitated organisational adaptation, by which firms achieved competitive advantage. At the time Grant (1991: p115) wrote: *"there has been a resurgence of interest in the role of the firm's resources as the foundation for firm strategy. This interest reflects dissatisfaction with the static, equilibrium framework of industrial organisation economics that has dominated much contemporary thinking about business strategy."*

The search for answers was given impetus by the publication of Mintzberg and Waters (1985) observations on how *"strategy is formed"* and their identification of *"deliberate and emergent strategies"*. This led academics and practitioners into new and existing scientific and social disciplines in an effort to understand and explain organisational phenomena in the strategy domain that could not be explained by the then existing body of strategy knowledge. These efforts, and the environmental circumstances, led to a shift in emphasis from traditional strategy to the resource based view of strategy.

3.7.1 The Resource Based View of Strategy

The resource based view of strategy has its roots in what Capra (2002) describes as the *"living systems"* view of the universe, and the first efforts to structure and validate the resource based view can be found in the work of Penrose (1959), Quinn (1980a and 1980b), Wernerfeldt (1984), Barney (1991), and Grant (1991). The resource based view has been heavily influenced by new thinking in the fields of evolutionary biology, complexity theory, economics and industrial organisation, organisational behaviour, political science, psychology, learning theories and sociology.

Essentially, the resource based view is focused on the *"resource bundles needed to be deployed to achieve or protect product market positions"* (Christensen, 2002). According to Christensen (2002) rents, within the resource based view, flow from

unique firm specific assets that cannot be readily replicated. These assets take the form of market resources, functional capabilities and integrative competencies and, in the case of capabilities and competencies, are rooted in people (Teece *et al*, 1997).

Barney (2002: p150) goes further and relates the resource based view back to Andrews' (1965) SWOT Analysis and states that while *"models of environmental threats and opportunities are grounded in a single approach to economic analysis (the structure-conduct-performance paradigm) the study of firm strengths and weaknesses draws on a wider variety of research traditions, some in economics and others in non-economic disciplines."* The most important of these are research on *"firm distinctive competencies"* and capabilities, *"Ricardian economics, and the theory of firm growth."*

There are two basic assumptions on which the resource based view of the firm rests:

- First, firms can be seen as bundles of productive resources and different firms possess different bundles of these resources – *"this is the assumption of resource heterogeneity"* Barney (2002: p155).
- Second, some of these productive resources will be very costly to copy or will be inelastic in supply – *"this is the assumption of resource immobility"* Barney (2002: p155).

If the resources possessed by the firm enable the firm to exploit opportunities or neutralise threats, are possessed by only a small number of competing firms, and if the resources are costly to copy or inelastic in supply, then they may be considered to be firm strengths and are potential sources of competitive advantage (Barney, 2002).

One way of identifying resources, capabilities and competencies that can provide organisations with a competitive advantage is for the firm to engage in value chain analysis (Barney, 2002). A value chain is a set of vertically related business activities that result in a product or service, and each set of activities or stages in a product / service value chain typically has financial, physical, human and organisational resources associated with it. Understanding in which stages of a product / service value chain a firm operates is useful for identifying the types of financial, physical, human and organisational resources a firm is likely to control.

The ability of these resources and capabilities to generate competitive advantages can then be analysed. However, firms that operate in the same set of value chain activities may approach these activities very differently and therefore may develop different resources and capabilities associated with these activities. The value chain approach, within resource based theory, can therefore lead to a very rich and complex understanding of a firms overall competitive position in an industry (Barney, 2002).

According to Barney (2002: p160), the question that must be asked is: *"Do a firms resources and capabilities enable the firm to respond to the environmental threats or opportunities? In order for a firm's resources and capabilities to be strengths, they must enable a firm to exploit environmental opportunities or neutralise environmental threats."* Obviously, resources and capabilities that do not enable a firm to exploit opportunities or neutralise threats can be considered to be weaknesses. It must be remembered that the firm's resources and capabilities are only valuable if they are aligned with the environment in which they are applied.

Changes in customer needs, industry structure, or technology can diminish the value of firm resources and capabilities and leaves the firm with two options: develop new and valuable resources and capabilities and / or apply traditional strengths in new ways. It must be remembered that a firm's resources and capabilities are valuable if, and only if, they increase the firms revenues or decrease its net costs compared to what would have been the case if the firm did not possess the resources or capabilities (Barney, 2002). Obviously the resources of different firms can be valuable in different ways – even for firms competing in the same industry and targeting the same market segment.

Understanding the value of a firm's resources and capabilities is an important first step in understanding a firm's strengths and weaknesses. However, if a particular resource or capability is controlled by numerous competing firms then that resource or capability is unlikely to be a source of competitive advantage for any one of them. Effectively, such a situation will lead to competitive parity. Barney (2002) is of the view that under conditions of competitive parity, though no one firm gains a competitive advantage, firms do increase their ability to survive. This raises the question of resource and capability rarity and suggests that if a firm is to gain a competitive advantage it must

exploit resources and capabilities that are different from those possessed by other firms competing in the same market. How rare a valuable firm resource or capability must be in order to provide a competitive advantage to the firm varies from situation to situation. A general rule of thumb is that as long as the number of firms possessing a specific valuable resource or capability is less than the number of firms needed to generate perfect competition dynamics in an industry, the resource or capability can be considered rare and a potential source of competitive advantage (Barney, 2002).

While valuable and rare organisational resources may be a source of competitive advantage, *"firms with such resources are often strategic innovators"* (Barney, 2002: p164), they can only be sources of sustainable competitive advantage if firms that do not possess them face a cost disadvantage in obtaining them or otherwise are unable to obtain them. This leads to the question of imitability: is it difficult or cost prohibitive to replicate or imitate a resource or capability? If it is, the firm in possession of the valuable, rare and difficult to imitate resource or capability will enjoy a sustained competitive advantage and above normal economic profits.

A firm's potential for competitive advantage depends on the value, rarity and imitability of its resources and capabilities but to fully realise this potential the firm must be appropriately organised to exploit its resources and capabilities. *"Numerous components of a firm's organisation are relevant to the question of organisation, including its formal reporting structure, its explicit management control systems, and its compensation policies. These components are often called complementary resources and capabilities because they have limited ability to generate competitive advantage in isolation. However, in combination with other resources and capabilities, they can enable a firm to realise its full potential for competitive advantage"* (Barney, 2002: p171). As such, the 'organisation' plays a facilitative role and is critical to the development of a sustainable competitive advantage. Absence of this facilitative mechanism will lead to unexploited opportunities, inappropriate responses to organisational threats and, in extreme cases, organisational chaos.

Teece *et al* (1997: p515) have observed that *"global battles in high technology industries ... appear to have followed a 'resource based strategy' of accumulating*

valuable technology assets, often guarded by an aggressive intellectual property stance. However, this strategy is often not enough to support a significant competitive advantage. Winners in the global marketplace have been firms that can demonstrate timely responsiveness and rapid and flexible product innovation, coupled with the management capability to effectively coordinate and redeploy internal and external competences. We refer to this ability to achieve new forms of competitive advantage as dynamic capabilities." Teece *at al* go on to highlight two key aspects that are *"not the main subject of attention"* in other strategy perspectives:

- "dynamic" refers to the firm's capacity to generate and renew competencies in order to achieve congruence with the constantly changing, and mostly complex, business environment, and
- "capabilities" emphasises the essential role of strategic management within the organisation in appropriately adapting, integrating, and reconfiguring organisational skills, resources and functional competencies to match the requirements of the environment in whatever form it takes.

Teece *et al* (1997, p516) therefore define their concept of *"dynamic capabilities"* as follows: *"the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments."*

While Barney (2002) does not specifically address the concept of dynamic capabilities in his value, rarity, imitability and organisation framework, it can be argued that dynamic capabilities are embedded in the fourth leg of the framework labelled 'organisation' and, for the purposes of this thesis, it is assumed that the argument is valid for the research and analysis that follows. Barney has titled the framework 'The VRIO Framework' (see *Figure 12: The VRIO Framework*) and it is a useful tool for understanding the relationship between value, rarity, imitability and organisation and organisational strengths and weaknesses. The framework is also useful for assessing the competitive implications and the potential for economic returns associated with exploiting any of a firm's resources and capabilities.

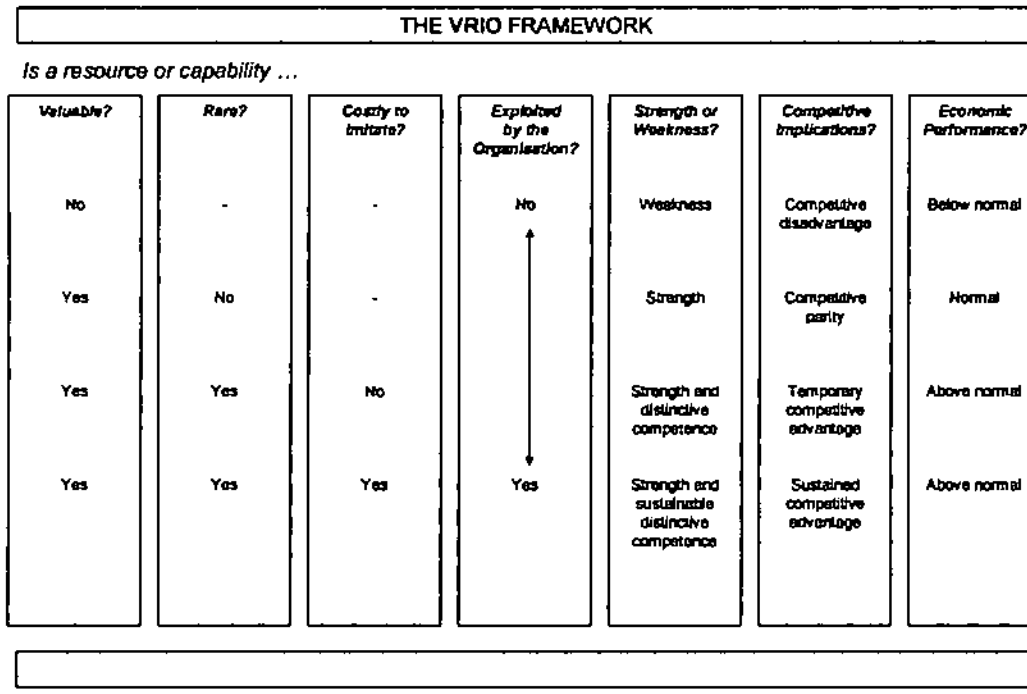


Figure 12: The Resource Based View - VRIO Framework

Adapted from: Barney J.B. (2002), Gaining and Sustaining Competitive Advantage 2nd Edition, Prentice Hall, New Jersey.

The success of the resource based view lies in its emphasis on firm flexibility, adaptation and constant evolution in response to the changing shape and requirements of the operating environment. This is facilitated by an organisation that emphasises dynamic capabilities (Teece *et al*, 1997), and promotes individual and organisational learning and innovation (Tidd *et al*, 2001) and the development of what Christensen (2002) calls functional capabilities and integrative competencies.

However, the primary focus of the resource based view is on resources, resource configuration, integrative competences and dynamic capabilities of the organisation and not the external environment in which it operates. As such, the organisation tends to be reactive to stimuli from the environment rather than proactive and, in effect, this limits the strategic options that are available to an organisation. As a result, the resource based view is not always an optimal response to complexity and uncertainty in the environment.

3.7.2 Core Competencies, Dynamic Capabilities and Organisational Learning

Derived from resource-based theory, the core competence approach was popularised by Prahalad and Hamel (1990) and Hamel and Prahalad (1994) who took the view that strategy is a process of "*collective learning*" (1990: p82) that develops and exploits distinctive competencies which are unique to an organisation and difficult to imitate. Distinctive competencies are a configuration of visible and invisible, tangible and intangible firm-based resources that, as an integrated whole, provide an organisation with competitive advantage.

For Hamel and Prahalad (1994) the secret to organisational success lies not with great products or services but with a unique set of abilities that underlies and facilitates the development and delivery of great products and services. These abilities are transferable and can be applied to different products and services that utilise the same or similar core technology thereby providing a foundation for continuous incremental innovation that can create new products and services and / or new product and service markets.

There are three tests that can be applied to identifying core competencies in an organisation (Prahalad and Hamel 1990: pp83-84):

1. the competence should provide "*potential access to a wide variety of markets*", for example, a competence in display systems enables an organisation to participate in such diverse businesses as calculators, TV's, monitors, and car dashboards;
2. the competence should "*make a significant contribution to the perceived customer benefits of the end product*";
3. the competence should "*be difficult for competitors to imitate. And it will be difficult if it is a complex harmonization of individual technologies and production skills*". Mintzberg *et al* (1998: p218) comment that a rival may acquire some of the technologies that comprise the core competence but will find it hard to duplicate the comprehensive pattern of internal coordination and learning.

According to Teece *et al* (1997: p524) the essence of a firm's competence is resident in the firm's organisational processes and these processes are shaped by the firms assets (positions) and its evolutionary path which is "*often rather narrow*". In addition the organisational routines, based on current or existing competencies, can create "*path dependencies*" (Teece *et al*, 1997: p522) that constrain a firm's ability to change its competencies to deal with new market realities (Sanchez, 2003). In effect this means that in situations where continuous learning is not taking place, or market relevance has shifted or declined, the core competency can become a "*core rigidity*" (Leonard-Barton, 1992: p111) that could inhibit the organisations ability to earn economic rents (profits) and even threaten the very existence of an organisation.

For Teece *et al* (1997: p516) the key to overcoming the problems associated with 'narrow evolutionary paths' and 'core rigidities' lies in what they call "*dynamic capabilities*" which can be described as the organisations "*ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments.*" According to Leonard-Barton (1992) dynamic capabilities thus reflect an organisations' ability to achieve new and innovative forms of competitive advantage given the path dependencies and market positions that are characteristic of a specific organisation.

The essence of competences and capabilities is embedded in various organisational processes, but "*the content of these processes and the opportunities they afford for developing competitive advantage*" are shaped significantly by the internal and market assets the firm possesses and by the evolutionary path it has adopted or inherited (Teece *et al*, 1997: p518). The assets of the firm include, *inter alia*, people, customers, relationships, intellectual property, technology (including organisational processes and routines), cash and property, and the evolutionary path bounds the strategic alternatives or options, arising out of the firms' asset base and configuration, that are available to the firm.

Organisational processes, according to Teece *et al* (1997), perform three roles:

1. *Coordination and integration (a static concept)*:

From a neo-classical economics perspective the price system coordinates and regulates the economy and markets, but managers coordinate and regulate activity inside the firm. This is an important idea in that the way the generation and delivery of products and services is organised by management inside the firm is the source of differences in firms' competence in various domains and the source of competitive advantage in the market. In various studies, cited by Teece *et al* (1997: p519), it has been shown that high performance was driven by special organizational routines that were coordinated and integrated by management.

Teece *et al* (1997: pp519-520) also noted that at a systems level productive and high performance systems display high levels of interdependency. This can also be observed in product, service and operational innovations which tend to rely extensively on coordination and interdependent activity to manifest. It is necessary to keep in mind that the notion that there is a high level of rationality or coherence to processes and systems is not the same concept as organisational culture but rather is similar to Nelson and Winter's (1982) notion of organisational routines which may well be embedded in an organisations' culture.

2. *Learning (a dynamic concept)*:

For Teece et al (1997: p520) learning is fundamental to the concept of dynamic capabilities. It is a process by which "*repetition and experimentation enable tasks to be performed better and quicker*", and "*new production opportunities to be identified*". Learning involves organisational and individual skills and, according to Levinthal and March (1993) and Mahoney and Pandian (1992), both resources and mental models are intertwined in firm level learning.

Learning processes are intrinsically social and collective and occur through the imitation and emulation of individuals and because of the joint contributions to the understanding of complex problems (Teece *et al*, 1997 and Leonard-Barton, 1995). According to Teece *et al* (1997: p 520) learning "*requires common codes of communication and coordinated search procedures*", and "*the organizational*

knowledge generated by such activity resides in new patterns of activity, in 'routines', or in a new logic of organization". The 'routines', or patterns of interaction are resident in group behaviour though certain routines or sub-routines may be resident in individual behaviour.

3. *Reconfiguration (a transformational concept)*:

In rapidly changing environments there is considerable value, indeed an imperative for survival, in the ability to rapidly and effectively change a firms' asset structure - including competencies and routines (Amit and Schoemaker, 1993). This means that the firm must develop the ability to scan the environment in order to evaluate markets and competitors and to quickly and efficiently accomplish reconfiguration and transformation ahead of shifts in the market and competitive moves. According to Teece *et al* (1997), the capacity to reconfigure and transform is a learned organisational skill requiring practice if an organisation is to achieve proficiency.

At the heart of competence, dynamic capability and learning theory is Penrose' (1959) "*The Theory of the Growth of the Firm*" where she investigated how firms' internal processes affected their behaviour and, treating the firm as a collection of productive resources, she focused on how and why firms grow. According to Penrose (1959) learning processes create new knowledge and form the basis of the growth of organisations through the reconfiguration of existing resources.

This was supplemented by Wernerfeldt (1984) who presented the concept of resource position barriers and examined the mechanisms by which resources extract economic rent from the market. Wernerfeldt (1984) contended that resource position barriers are a source of competitive advantage and can be created by individual and organisational learning through experiences in using the resources. This leads to lower costs for incumbents and imposes higher costs on imitators.

With the resource based theory foundations provided by Penrose, Wernerfeldt and Barney (see section *3.7.1 The Resource Based View of Strategy* above) and the competency, dynamic capability and learning theories discussed in this section, Sanchez

(2001 and 2003) developed a framework for the integration of the firm based views of strategy. This framework is built on the perceived need, identified by Elfring and Volberda (2001) and Mintzberg (1998) amongst others, to synthesize the many insights being generated by the diverse approaches to strategic management.

Sanchez (2001: p146) framework incorporates three perspectives as the basis for an integrated theory of strategy formation: resources, competencies and dynamic capabilities. However, while learning is seen as integral to all three of these perspectives, the framework seems incomplete without considering the impact of learning on knowledge creation and firm evolution.

3.7.3 The Knowledge Based Theory of the Firm

Eisenhardt and Santos (2002) are of the opinion that there is not yet unanimous agreement on the nature of organisational knowledge, the specifics of the Knowledge Based View, and whether such a view constitutes a theory of strategy. As such, and despite the extensive research that has been done, there is no consensus understanding on whether the research supports the existing knowledge based theory or adds predictive ability to other theories of strategy.

This is supported by the concurrent existence of three broad streams of thought on the essence of the Knowledge Based View:

- The Knowledge Based View is embedded in, or can be seen as an extension of, resource-based thinking where the concept of resources is extended to include intangible assets (Grant, 1996a; Decarolis and Deeds, 1999). Knowledge, in this view, can be acquired, transferred and integrated to achieve competitive advantage. For Eisenhardt and Santos (2002) this implies that the knowledge based view is simply a special case of resource based thinking rather than a unique theory of strategy.
- The Knowledge Based View is an extension of organisational learning into strategy and organisational theory (Kogut and Zander, 1992 and 1996; Cohen and Levinthal, 1990).

- The Knowledge Based View should be perceived as a process of ongoing social construction that is a part of the fabric of the organisation (Spender, 1996). This view offers a number of useful and empirical insights into the rich social processes that lead to the sourcing, the transfer and the integration of knowledge within and across organisations.

The concept of knowledge as applied in strategy theory is grounded in Western philosophy and epistemology according to Nonaka and Takeuchi (1995). As such, knowledge is modeled as an "*unambiguous, reducible easily transferable construct, while knowing is associated with processing information*" (Eisenhardt and Santos, 2002: p140). This approach has given rise to a number of theories that suggest that organisations function like machines, such as Taylor's (1947) scientific management perspective, and work should be entirely determined by codified knowledge held by a select number of individuals.

Newer conceptions of knowledge based on the distinction between explicit and tacit knowledge have, however, emerged. Tacit knowledge is linked to the individual and is very difficult, if not impossible, to articulate. Only through learning and doing is it possible to acquire this knowledge. As knowledge is explored, applied and socially justified is it possible to codify some parts of it and make it explicit. According to Eisenhardt and Santos (2002: p140) there is a cognitive framework or structure that facilitates the process of knowledge codification i.e. "*knowledge codification requires the development of mental models and the existence of a language in which knowledge can be articulated*".

The distinction between tacit and explicit knowledge is particularly important when one considers the predominant knowledge based approach to strategy which identifies tacit knowledge as the most strategic resource firms possess. Grant (1996a) and Decarolis and Deeds (1999) argue that since tacit knowledge is almost impossible to imitate and is also relatively immobile it provides a solid foundation for developing and sustaining competitive advantage.

While the thinking around the differences between tacit and explicit knowledge provides a foundation for debate around the basic nature of knowledge, more recent theory suggests that knowledge is deeply rooted in cognitive psychology and sociology (Weick and Roberts, 1993; Spender, 1996; von Krogh, Roos and Kleine, 1998; Cook and Brown, 1999). This theory focuses on the process of knowing rather than on knowledge as an objective and transferable resource, and views knowledge as socially constructed through the creation of meaning that occurs in ongoing social interactions (Weick and Roberts, 1993; Cook and Brown, 1999). As such, according to Eisenhardt and Santos (2002: p141) and von Krogh, Roos and Slocum (1994), instead of knowledge being "*a cognitive representation of reality, knowledge is a creative activity of constructing reality*".

Organisational learning is critical to the thinking and theory on the knowledge based view of strategy. According to Eisenhardt and Santos (2002: p141) learning "*can be defined as the process by which new information is incorporated into the behaviour of agents, changing their patterns of behaviour and possibly, but not always, leading to better outcomes.*" While the initial focus of learning theory was on individuals, it is now also conceptualised at the organisational level where it is considered to be an essential process in the adaptation of firms to the environments in which they operate (Argote, 1999).

Penrose (1959), in her ground breaking work "*The Theory of the Growth of the Firm*", was among the first to describe how learning processes create new knowledge which forms the basis of the growth of firms through the combination and recombination of existing resources. Cyert and March (1963) supplemented Penrose' (1959) theory with their thinking around the concept of organisational routines which, Cyert and March propose, form the basis of collective learning in organisations. These routines are perceived to be executable capabilities for recurring performance that have been learnt by the firm in response to environmental pressures, and represent manifestations of organisational memory (Cohen *et al*, 1996). As such, the routines "*encode inferences from history, and guide individual and group behavior in organisations*" (Eisenhardt and Santos, 2002).

Brown and Duguid (1991) also noted the impact of environmental pressures, both firm based and external to the firm, on individual and organisational learning in their argument that learning theory should be distanced from codified, transferable and objective notions of knowledge and focus instead on knowledge in context. This idea is seen in the writings of Nonaka and Takeuchi (1995) who propose that organisational learning is an evolutionary process (continuous adaptation to the environment) that is influenced by past experiences, is focused on developing and modifying routines, and is facilitated by organisational memory. This builds on the evolutionary economics approach of Nelson and Winter (1982) who integrated organisational knowledge and routines with the notion of dynamic competitive environments.

While the focus of Nelson and Winter's (1992) article was on the individual and organisational response to information complexity and uncertainty in the environment, which took form in a view of the firm as a repository of knowledge that is represented by routines that guide organisational action, it was not until Teece *et al* (1997) that this focus was developed and formalised as the dynamic capabilities approach to strategy. This approach proposes that in complex environments, which are usually characterised by dynamic markets, no competitive advantages are sustainable and superior performance occurs by continuously creating temporary advantages (Grant, 1996a; Eisenhardt and Santos, 2002; Porter, 1991; Spender, 1996; Teece *et al*, 1997; Brown and Eisenhardt, 1998). In these situations the ability to learn and quickly change resource configurations, including capabilities and routines, in order to adapt to new environmental and market realities is critical for firm performance. In this regard, Teece *et al*, (1997: p516) argue that competitive advantage is dependent on particular organizational and managerial processes, termed "*dynamic capabilities*", that are defined as the firms "*ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments*" (see also: Eisenhardt and Santos, 2002: p143).

In closing this overview of the knowledge based perspective of strategy, it is necessary to note the argument of Spender (1996) who posits the idea that a dynamic theory of the firm based on knowledge is conceptually different to a dynamic view of the firm based on resources. While there is no dispute that knowledge resides in tangible and intangible

firm resources, the nature of knowledge and the relationship between knowledge and firm resources needs clarification. Spender (1996) takes the position that knowledge is not an observable and transferable commodity and organisations are not collections of rational agents. Rather, Spender suggests, organisations learn and have knowledge to the extent that their members are malleable beings whose sense of self is influenced by the organisations evolving identity (see also Kogut and Zander, 1996; Eisenhardt and Santos, 2002). Collective knowledge is therefore the basis of human meaning and communication and the firm is seen as a system of knowing activity rather than as a system of applied knowledge bundles. Given this background, Kogut and Zander (1996) propose a contextual, process oriented and situated view of knowledge with closer ties to learning theory and social identity.

An important consideration in this line of reasoning is the systemic nature of knowledge when considered in the context of the firm. Spender (1996) contends that the firm is seen as an evolving and quasi-autonomous system of knowledge production and application with emergent and self organising properties that arise out of the multiple interactions of its elements and agents with one another and with the environment. This view is similar to the view held by Brown and Duguid (1991) who see organisations as systems of communities-of-practice. These perspectives also have much in common with Stacey (2003) who conceptualises organisations as complex adaptive systems and, when the human behavioural element is added, as complex responsive processes that lead to the emergence of innovative behaviour amongst loosely connected actors.

Perhaps the most significant aspect of the knowledge based view, and the associated learning theories, is that it is embedded through a systemic relationship in the resources, processes, routines, competencies and dynamic capabilities of the firm. As importantly, the knowledge of the firm, and its ability to learn from its environment, is central to the delivery processes and routines that provide the firm with competitive advantage and the market with the delivery of value from the firm. These aspects justify the firms' existence and validate the knowledge based view as a critical perspective in strategy theory.

3.7.4 The Activity Based Theory of the Firm and the Role of the Value Chain

According to Jarzabkowski (2005) strategy "*is not just something a firm has – a position. It is also something a firm and its multiple actors do.*" For Jarzabkowski (2005: p42) "*Strategy is the stream of goal-directed activity arising from the activity system*" and, by way of explanation, she states that "*Conceptualizing strategy within an activity system provides an interdependent view, understanding how the actions in one part of the system affect actions in another part, with these interdependencies mediated by the strategizing practices.*" For purposes of this thesis it is interesting that Jarzabkowski (2005: p42-43) sees strategy as activity within a systems context and states that her study seeks to explain "*how the dynamics of the activity system shape strategy over time*".

While this perspective has attracted a lot of attention, and a number of eminent strategy scholars (including Andrew Pettigrew and Richard Whittington) have hailed Jarzabkowski's 'strategy as practice' perspective as "*the new strategy-as-practice field*" and "*a new tradition in strategy research*", the idea that strategy manifests in a series of activities was also presented by Porter (1985) in his conceptualisation of the 'Value Chain' as a firm based view of strategy, and Mintzberg and Waters (1985 and 1987) who suggested that strategy could be seen as a pattern in a stream of activities.

The idea that defines the activity based theory of the firm is that all activities of the firm should be focused on creating and delivering value - for the market in general and the customer in particular. It is through the creation of this value that other stakeholders in the "*value system*", such as suppliers and channel partners, will benefit (Porter, 1985: p34). However, it is also the creation of specific value through a particular organisational posture and / or unique competencies, routines and dynamic capabilities that a firm may achieve competitive advantage (Barney, 2002; Hamel and Prahalad, 1994; Teece *et al*, 1997).

In this regard, Ohmae (1988: p149) has a particular and highly relevant perspective on the nature of the relationship between value and competitive advantage: "*Of course it is important to take the competition into account, but ..... it cannot come first. First comes*

painstaking attention to the needs of customers. First comes close analysis of a company's real degrees of freedom in responding to those needs. First comes the willingness to rethink, fundamentally, what products are and what they do, as well as how best to organise the business system that designs, builds and markets them. Competitive realities are what you test possible strategies against; you define them in terms of customers. Tit-for-tat responses to what competitors do may be appropriate, but they are largely reactive. They come second after your real strategy. Before you test yourself against competition, strategy takes shape in the determination to create value for customers".

In an environment of discontinuous change, disequilibrium and hyper-competition D'Aveni (1995) the statement that *"strategy takes shape in the determination to create value for customers"* has a number of implications for organisations, three of which are critical:

- the organisation must continually monitor the market and internalise changes in market dynamics and needs,
- the organisation must be learning from its internal and external environment and constantly evolve to meet the changing needs of the market, and
- the focus is on the delivery of value to the customer rather than the establishment and defence of a competitive position in the market - a competitive position will evolve from this focus.

Adding more value to the customer than the competition is a cornerstone of competitive advantage for organisations and it is premised on an understanding of the concept of economic value, how value is created in organisations, and how it is delivered to the customer (Porter, 1985).

The competitiveness of an organisation is dependant on the value the organisation is able to create for its customers. Value can take many forms but, for the sake of simplicity, it is defined in economic terms: "*value is the amount customers are willing to pay for the products and services an organisation provides*" (Porter, 1985: p38). From the organisations perspective, the goal is to ensure that the value created for customers (represented by the purchase price) exceeds the cost to the organisation of delivering that value.

Economic theory tells us that the purchase price (a measure of customer value) will vary according to the competitive environment in which an organisation finds itself. The more intense the competition, the lower the amount the customer is likely to pay. However, the organisation can achieve advantages in a competitive environment by adopting what Porter (1985: p11) calls "*generic strategies*". According to Porter there are three generic strategies: cost leadership, product / service differentiation and focus (on specific markets within and / or across industries). The appropriate application of these strategies will allow an organisation to manipulate prices and costs and, in so doing, increase profits - thereby creating greater value for the organisations' shareholders / stakeholders.

The basic tool for diagnosing, and finding ways to enhance, competitive advantage through the creation of value (achieved by the appropriate application of the generic strategies) is what Porter (1985: p33) calls the "*value chain*". The value chain divides an organisation into the discrete activities it performs in designing, producing, marketing and distributing its product and services. Furthermore, it *"displays total value, and consists of 'value activities' and 'margin'"* (Porter, 1985: p38). Disaggregating the organisation in this way facilitates identification of the activities that underlie competitive advantage as well as the linkages and dependencies amongst activities that are central to competitive advantage. In addition disaggregation highlights opportunities for partnerships and alliances in the chain that can enhance performance, for example, outsourcing (Porter, 1985).

From the perspective of the application of generic strategy, wherever this may be appropriate, the value chain facilitates the identification of the sources of differentiation and the drivers that create differentiation, and an understanding of the behaviour of the associated costs. Many organisations also use the value chain as a mechanism to derive a strategically aligned organisational structure, and to develop an understanding of the relationship between technology and competitive advantage (Porter, 1985).

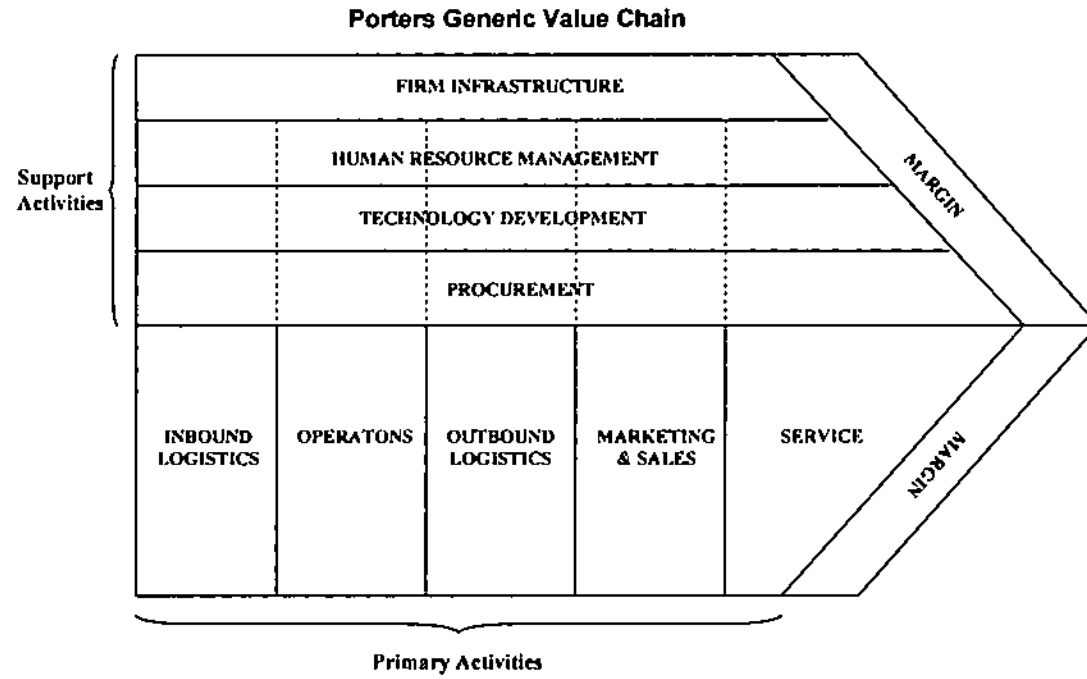


Figure 13: The Generic Value Chain

Source: Michael Porter (1985), Competitive Advantage Published by Free Press, New York

An important aspect of the value chain is that it is embedded in a larger stream of activities which Porter (1985: p34) refers to as the *"value system"*. Suppliers have value chains (upstream value) that create and deliver the purchased inputs used in an organisations chain. In addition, many products pass through the value chains of channels (channel value) on their way to the buyer. This reflects the networked / partnership and systemic nature of value generation and, ultimately, plugs the organisation and its value system into Perlas (2000) *"tri-polar world"* that consists of the political, social and economic realms of human existence.

The value chain is an analytic framework or tool that is most commonly applied in the context of the positioning school of strategic thought (as described by Mintzberg *et al*, 1998). From this perspective the value chain reflects a prescriptive and mechanistic approach to strategy, the organisation and its operating environment, and a 'behavioural' view of human behaviour and interaction (Mintzberg *et al*, 1998 and Stacey, 2003). For optimal effectiveness of value delivery, within a complex environment, this is problematic.

Porter (1998), in a new introduction to his 1985 book titled "*Competitive Advantage*", seeks to clarify the perspective the book adopts. According to Porter (1998: p.xv), while "*Competitive Strategy*", published in 1980, "*concentrates on the industry, 'Competitive Advantage' concentrates on the firm .... At the book's core is an activity-based theory of the firm.*" If we adopt this perspective and view the value chain as a descriptive and organic framework that provides a picture of an organisations processes (sets of activities) and activities, at any point in time, we can see that it is not necessarily anchored in the positioning school theory and can be applied, with good effect, in firm based theory.

The activity based view is attractive because it is rooted in what the firm does. It is, therefore, observable, tangible and can be managed. As such, strategy is no longer just a vision or an idea but is a particular configuration of activities that a firm adopts. Porter (1998: p.xviii) states that strategy "*becomes the particular array of activities aligned to deliver a particular mix of value to a chosen array of customers. The configuration of each activity embodies the way that activity is performed, including the types of physical and human assets employed and the associated organizational arrangements. Competencies, then, become part of the specific activities rather than abstract and disconnected from cost and buyer value.*"

Of particular interest to this thesis is Porter's (1998: pp.xviii-xix) view that when "*strategy was defined in terms of broad positioning concepts, a clear separation between strategy and structure was meaningful and useful. 'What' and 'how' were comparatively distinct.*" However, the recognition that a firm is a collection of discrete activities blurs the previously common distinctions between strategy and organisation. Furthermore, according to Porter, in "*the competition and strategy field, where there has been a strong tendency to dichotomize external factors (industry structure and positioning) and internal ones (core competencies, critical resources)*", in the activity based view this is "*a false dichotomy*". In effect the activity based view connects external factors with internal factors. Activities provide the connections between factor markets and product market positions, activities are observable and operational and are directly connected to cost and differentiation.

3.8 Scenario Planning, Learning, and the Art of Strategic Conversation

According to Mintzberg *et al* (1998: pp29-33) strategy formation in the environmental view is perceived as a controlled, conscious process that produces full-blown and deliberate strategies for formal implementation. The strategies are based on extensive analyses that use existing data (current and historic) to predict a future state for which the strategy is formulated and implemented. Mintzberg *et al* (1998: p66) have labelled this the *"Fallacy of Predetermination"*, and Stacey (2000 and 2003) has voiced his concerns about the fact that strategies, in the environmental view, are premised on a high degree of certainty (an assumption of predictability) about the future / projected environmental conditions.

As complexity and uncertainty in the environment has increased over the past 35 years, and the design, planning and positioning approaches have become less effective, more firms are incorporating the various concepts of the firm based view into their organisations. But the firm based view, while more relevant than the environmental view in complex and uncertain environments, is also limited in its ability to address the challenges that complexity and uncertainty create for firms.

In the firm based views a firm's strategic options will be constrained by its resource configuration, and its ability to change its resource configuration, at any point in time. As such, the effectiveness of the firm based views of strategy, in the face of the quick and discontinuous change that characterises markets today, is almost entirely dependant on the dynamic capabilities of the firm. While the development of 'leading edge' dynamic capabilities can overcome this constraint, it also emphasises the fact that the firm based views are primarily internally focused and reactive to external environmental conditions.

Since the main concern of most firms is what will happen tomorrow, next week, next year and further into the future, and prediction - while ideal - is impossible, firms will continue to look for an approach to strategy formation that gives them a better handle on what the future may bring. The rationalist and linear cause-and-effect thinking of the

environmental view and the internally focused and reactive firm based views, are less than ideal solutions to the problem of how to find competitive advantage in the future.

Scenario planning may provide a partial solution to this problem. The appropriate application of scenario planning often results in greater clarity and a better informed point of view on the potential shape and characteristics of the future external environment. It draws on the concepts, frameworks and tools provided by the environmental schools, and enhances the firm based views of strategy through providing direction for the acquisition and development of resources, competencies and capabilities. Most importantly, scenario planning can also lead to the identification of a wider range of strategic options and enhance strategic decision making within organisations.

Schwartz (1996: p4) defines scenario planning as "*a tool for ordering one's perceptions about alternative future environments in which one's decisions might be played out. Scenarios are stories about the way the world might turn out tomorrow, stories that can help us recognise and adapt to changing aspects of our present environment.*" Porter (1985: p446) provides another perspective that enhances Schwartz' (1996) definition: a scenario is "*an internally consistent view of what the future might turn out to be*" - not a forecast, but one possible future outcome. Ringland (2002: p2) sees scenarios as "*possible views of the world, providing a context in which managers can make decisions. By seeing a range of possible worlds, decisions will be better informed, and a strategy based on this knowledge and insight will be more likely to succeed.*"

These definitions, philosophies and approaches are premised on four critical elements that must be present for successful scenario planning:

- A set of internally consistent views of how the future could evolve (van der Merwe, 2002 and Porter, 1985);
- The views provide a context for decision making (Ringland, 2002);
- The mental models and views of individuals in the organisation should converge on a common understanding of the issues and opportunities facing the organisation. This is facilitated through what van der Heijden (1996 and 2005) refers to as *"strategic conversation"*,

- The three elements above are enabled by an individual and group learning paradigm that aligns the organisation with a common understanding of the organisations' operating context (van der Merwe, 2002 and Chermack and van der Merwe, 2003).

From the perspective of strategy formation the most important aspects of the scenario planning approach is the strategic conversation it stimulates and the individual and group learning about the operating environment that takes place. Strategic conversation emerges both formally and spontaneously from an ongoing process of strategy formation and implementation, and serves to build a "*solid line of strategic reasoning, around which others in the organisation can gather.*" (van der Heijden, 2005: p.xvi). Essentially, it builds consensus and aligns views in the organisation around how the future is likely to unfold and, as a result, enhances organisational learning and organisational decision making processes (van der Merwe, 2002). As such, scenario planning must be considered critical to the development of an organisation that learns, innovates, and adapts to the changing circumstances of its operating environment.

Both strategic conversation and learning (two sides of the same coin) help people within an organisation to converge on a common understanding of the challenges, issues and opportunities that need to be addressed, and this facilitates a more appropriate and effective strategic response to opportunities and threats in the environment (van der Heijden, 2005 and van der Merwe, 2002). An interesting 'spin-off' is a dramatic improvement in operating efficiency as people develop shared objectives and motivations, debate and negotiate solutions, and learn together from actions that are taken in pursuit of the shared objectives (van der Heijden, 2005).

This search for commonality of understanding and purpose needs to be seen in the light of the reality that organisations consist of people, each of whom brings a unique mental model to the organisation. According to van der Heijden *et al* (2002: p158) mental models are "*those deep-rooted recipes, assumptions and guiding ideas that exist in our minds that determine how we interpret events going on around us, that predispose us to expect certain results, and ultimately, that guide our actions.*" Unfortunately, these mental models can limit our thinking because they are the source of "*cognitive filters, recipes and biases*".

Although mental models are generally thought to exist only at the individual level, they in fact also exist at organisational and community levels. As people work together and share experiences, it is inevitable that they begin to develop consensual views of the future. This is particularly relevant in older, larger organisations where success tends to lead to more defined and entrenched mental models (van der Heijden *et al*, 2002).

However, van der Heijden *et al* (2002: p160) has some concerns about these entrenched mental models: "*although the recipes introduce an element of efficiency in managing large organisations, they become problematic if they are not periodically challenged.*" In other words, while an organisations 'recipe' may once have been built on 'rules' that functioned well, both the rules and recipe are always in danger of becoming obsolete as complexity and uncertainty come into play.

Since both the process and content of strategy formulation will be a result of the individual and organisational mental models at play, it is important that we understand how a mental model is formed and shaped. van der Heijden (1996) sees the strategy process as a strategic conversation with two parts: the formal well-defined part that revolves around the planning and budget cycles and quantitative information, and the informal part consisting of "*the casual conversations that people engage in at the coffee machine, in corridors, or over lunch. This part is not designed or controlled by the managers, and is usually qualitative and anecdotal in nature*" (van der Heijden *et al*, 2002: p161). The second part is extremely important because it determines where people's attention is focused. Both parts of the conversation, and the manner and process by which the conversations took place, are influenced by the individual and organisational mental models in existence, and reflect how the individuals 'see' the world, how they interpret events, and how they decide what is important and what is not.

Conversations that influence mental models that in turn influence conversations, constitute a system that is locked in, predetermining where attention is focused in the organisation (van der Heijden *et al*, 2002). According to van der Heijden *et al* (2002: p161-162), there are a number of problems associated with these processes and systems:

- *"The models are seldom exposed and subjected to scrutiny"*. While this may not be a problem in times of stability, as there may be a good match between the mental models of the decision makers and unfolding reality, in times of rapid change the mental models will break down as complexity is factored in. "*Mental models can become a dangerously mixed bag; rich detail and understanding can coexist with dubious assumptions and selective inattention to alternative interpretations of evidence, and projections that are pretence.*" (See also: Wack, 1985a).
- *"Biases ensure that the models are enduring"*. Individuals and organisations will retain their established theories and assumptions about their customers, markets and competition. In times of change this can quickly condemn the organisation to obsolescence.
- *"There may be excessive integration of the models leading to group think"*. Individuals, forming part of a cohesive group, tend to suppress any ideas that do not accord with the ideas favoured by the group or powerful and influential members in the group. As such, critical ideas are inhibited and only ideas and courses of action favoured by the group are examined.
- *"Alternatively, there may be a complete fragmentation of the mental models"*. In this situation there is little or no sharing of ideas and the organisation cannot function or act as a cohesive team. There are so many factions that it becomes impossible to start a coherent strategic conversation and paralysis takes hold.
- *"The models include expectations of what will happen in a given situation, the sequence in which things will happen, possible alternative courses of action, and the information required to decide"*. Because of these assumptions the models develop within a limited and rigid information domain and the effects of such framing biases makes it difficult to introduce and integrate new information and different perspectives into the information set.

Given the above, it is the view of van der Heijden *et al* (2002) that an effective strategic conversation would need to incorporate the following principles:

- All mental models must be made explicit;
- A balance between commonality and variety of models is established;
- A wide range of quantitative and qualitative information is introduced into the conversation.

It is in the situations described above that scenario planning plays a critical role. Through the provision of a framework, combining the formal and informal elements of the strategic conversation, an organisations' executive and management is required to confront uncertainty by developing a set of plausible, but by no means certain, future conditions. It stimulates *"teams to think together in a disciplined and systemic manner, examine a wide range of information, to articulate and argue the logic of their understanding of the present, and to expose their assumptions as to how and why the future may evolve in particular ways"* (van der Heijden *et al*, 2002:p162). The outcomes of the strategic conversation include the development of a common language, the realignment of 'recipes' or mental models, and a shared, often new and rich, understanding of the situation. *"In the context of strategy, this shared understanding provides a platform for more effective organisational decision making"* (van der Heijden, 2002: p162).

Since the ultimate aim of organisations is to ensure their survival and wellbeing, and the business environment is subject to constant change, the organisation that adapts first will have the best chance in a competitive marketplace. This is where scenario planning can enhance the firm based views of strategy. Adaptation implies action, and adaptive actions come about through *"adaptive organisational learning"* (van der Heijden et al, 2002: p172). *"In business, 'learning' is generally used in the context of attempts on the part of organisations to improve their efficiency, effectiveness and innovation in uncertain market conditions. The greater the uncertainty in the environment, the greater the need for learning. This is to enable quicker and more effective responses to the challenges faced."*

A number of studies have been conducted suggesting that the majority of large and well established organisations suffer from learning disabilities that slow their ability to adapt to changing environmental conditions. de Geus (1997) wrote that over the long run survival depends on sensitivity to the environment and the ability to adapt to meet changing environmental conditions. This can only come about through the organisations ability to learn, to experiment, to continually explore opportunities to create new sources of growth and wealth, and to change behaviour so that it is appropriate for the conditions of the market.

According to Kolb (1984) the learning process consists of the four stages set out in "Kolb's Learning Cycle" below:

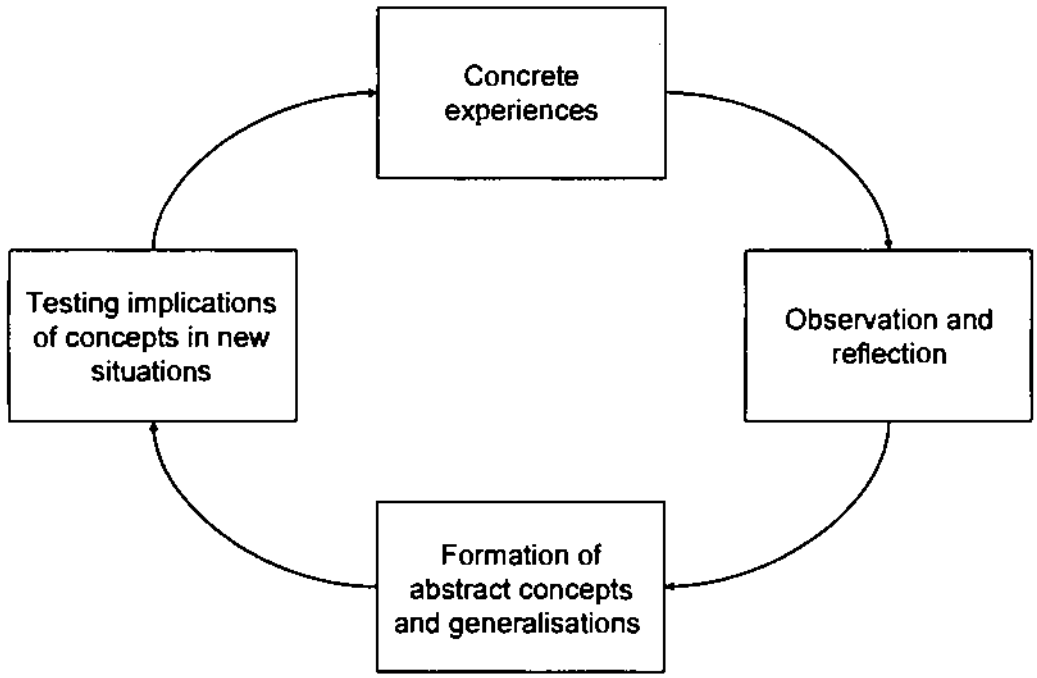


Figure 14: Kolb's Learning Cycle

Adapted from: Kolb D A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Prentice Hall, New Jersey.

van der Heijden *et al* (2002: p172), paraphrasing Kolb's work, state that the learning process is an iterative one: learning begins with observing what has occurred, we reflect on what has been observed and how it can be conceptualised, we make an assessment as to the underlying structures that drive the behaviour we observed and, from this, we develop a theory as to what is happening. This theory then influences the development of a response leading to the implementation of suitable and appropriate actions in the form of new patterns of behaviour. These actions establish expectations. However, almost invariably reality will deviate from the expectation, thereby drawing attention to what is different from our expectation, and this will start the next iteration of the learning cycle. This learning process is ongoing and not episodic. It is important to note that reflection and action work together to produce learning; without action there can be no learning, since all that can be reflected on is one's previous reflections (Kolb, 1984).

Organisational learning takes place when the learning cycle is performed collectively. Individuals come together to reflect on their experiences, collectively developing new theories based on observation, and then acting together. This process is important because in joint reflection there is an unbundling and sharing of individual world views that leads to a shared understanding of situations and an alignment of mental models. As such, joint action is critical to organisational learning since this closes the loop and precipitates the next iteration of Kolb's Learning Cycle (Kolb, 1984 and van der Heijden *et al*, 2002).

This process is known as double loop learning and involves altering all organisational rules and recipes that no longer fit experiences. *"This necessitates a reflective process of continuous experimentation and feedback, in which organisations act to grasp the systemic source underpinning events, ultimately arriving at new ways of looking at the world. Action is a fundamental part of this type of learning, which we have called adaptive organisational learning. As we have already seen, scenario planning is one such process"* (van der Heijden *et al*, 2002: p174).

Scenarios are based on driving forces, current and potential, that might affect or shape the environment in which the organisation operates. These driving forces are both within and outside the organisation and are often only recognised, by those participating in the scenario building process, through "out-of-the box" thinking. In the words of Schwartz (1996: p3) *"to act with confidence, one must be willing to look ahead and consider uncertainties: "What challenges could the world present me? How might others respond to my actions? ... Scenarios are a tool for helping us to take a long view in a world of great uncertainty."*

For van der Heijden (2005) developing scenarios is a social, conversational process in which individuals collaborate to build the unconnected insights of their knowledge into coherent structures. Central to this social, conversational process is a systems approach to analysing the driving forces of the contextual environment. This approach starts with known and observable events and identifies the multiple and inter-related trends and patterns in the events. These trends and events will display structure in the form of organised behaviour and it will also be possible to see patterns in terms of relationships

between multiple trends. Underlying all of this will be a systemic structure that will drive the patterns, trends and visible events. This process, jointly conducted, provides a means by which individual unstructured insights and knowledge are given clarity and meaning and can be integrated into our individual and organisational mental maps (van der Heijden *et al*, 2002).

Perhaps the most important recent development in strategy formulation is the increased use of scenario planning as a means to develop the ability of individuals and organisations to cope with uncertainty and change in the environment. This is achieved through the two mechanisms discussed above: strategic conversation, and continuous learning – especially about the future. These two mechanisms are interdependent in that strategic conversation leads to learning, and learning leads to further strategic conversations (van der Heijden, 2005).

Scenario planning, through its focus on building stories of possible futures based on current trends, circumstances and environmental factors, provides a framework that facilitates strategic conversation and learning. This is summarised by van der Heijden *et al* (2002: p176): *"In essence, the scenario process is about enabling managers to visit and experience the future ahead of time, thereby creating memories of the future."* This creates *"a matrix in the minds of managers and serves as subconscious guides to make sense of incoming environmental signals and to act on them."*

Scenarios are very useful as an externally focused methodology for managing uncertainty in the future external environment, and a number of benefits have been noted by a leading proponent of the approach - Royal Dutch Shell (2002):

- *"Scenarios help us to understand today better by imagining tomorrow, increasing the breadth of vision and enabling us to spot change earlier.*
- *Scenarios provide an effective mechanism for assessing existing strategies and plans, and developing and assessing options.*
- *Participating in the scenario building process improves the ability to manage uncertainty and risk. Risky decisions become more transparent and key threats and opportunities are identified."*

Scenario planning is receiving more and more attention as organisations seek to improve strategy formation and strategic decision making in the light of the shortcomings of traditional strategy (the environmental or prescriptive view) and the firm based views of strategy. The greatest strength of scenario planning is that it provides a rigorous, externally focused means of managing uncertainty in future environments, and the insights and options this methodology generates provides a solid foundation for the development of robust and sustainable strategy.

3.9 A Synthesis of Perspectives: The Structure of the Environmental and Firm Based Views of Strategy

The preliminary review of the strategy literature concluded that the strategy discipline is characterised by a high degree of fragmentation and theoretical pluralism caused primarily by three factors:

1. There is no common understanding or definition of what strategy is and how strategy comes into existence.
2. The firm context has changed over time and firms have responded with strategy and strategic frameworks and perspectives that are appropriate for the relevant contexts but this has not contributed to the development of a cohesive and integrated theory of strategy formation.
3. Academics, researchers and practitioners have to contend with the absence of a cohesive theoretical foundation or framework that describes, explains and predicts the behaviour of firms and markets.

In order to answer the research questions and meet the research objectives arising from the preliminary review, the Literature Review looked at the external and internal contexts that give rise to strategic behaviour in firms. This included:

- the degree of stability or complexity in the environment and firm;
- the systemic nature of organisations and how organisations interact as part of a system with their markets and environments;
- how individuals and organisations learn, and codify the knowledge acquired through learning, about their organisation and the markets and environments in which the organisation operates;

- the impact of individual and organisational cognition (organisational culture) on the formation of strategy.

These contexts provided a foundation on which to explore the nature of strategy and examine the many perspectives, theories, frameworks and models that are seen by most people to be strategy.

The nature of strategy and the contextual foundations of strategy, discussed above, are subjected to further exploration (in Chapter 4) as part of the development of the argument that leads to the presentation of a cohesive, inclusive and integrating model of strategy formation. However, it is necessary to structure the existing perspectives, theories, frameworks and models, using the Literature Review, so as to establish a base on which to build the new model of strategy formation.

Each perspective of strategy formation that has been discussed to this point in the thesis is premised on sound and robust theory but is narrow in its view of the strategy discipline. Moreover, each of the perspectives often consist of numerous sub-views which the Literature Review has attempted to acknowledge and capture in the categories of perspective set out in the Environmental and Firm Based Views summarised in this thesis.

Of particular interest to the argument being presented is that the structures of the Environmental and Firm Based Views are fundamentally different. While each of the three perspectives in the Environmental View is premised on similar theoretical foundations and assumptions (the assumptions of the design school), they are different in focus and the degree to which strategy formation is formalised. However, in contrast, the four perspectives making up the Firm Based Views each have different theoretical foundations and each deals with a different aspect of the whole that is the organisation. In emphasizing that the four theories describe the whole organisation, it must be remembered that the four main theories that make up the firm based views are all embedded in firm resources and all are interrelated.

The environmental view developed from the premises of:

- the design school, which sees strategy formation as a process of conception,

- the planning school, which provided structure for the implementation of formed strategy in the organisation, and
- the positioning school, which provided theory and frameworks for the analysis of the competitive and industry environment in which the organisation operates.

As such, the environmental view evolved, off a common platform, into a robust perspective for stable and predictable contexts (see *Figure 15: The Structure of the Environmental Perspectives of Strategy*).

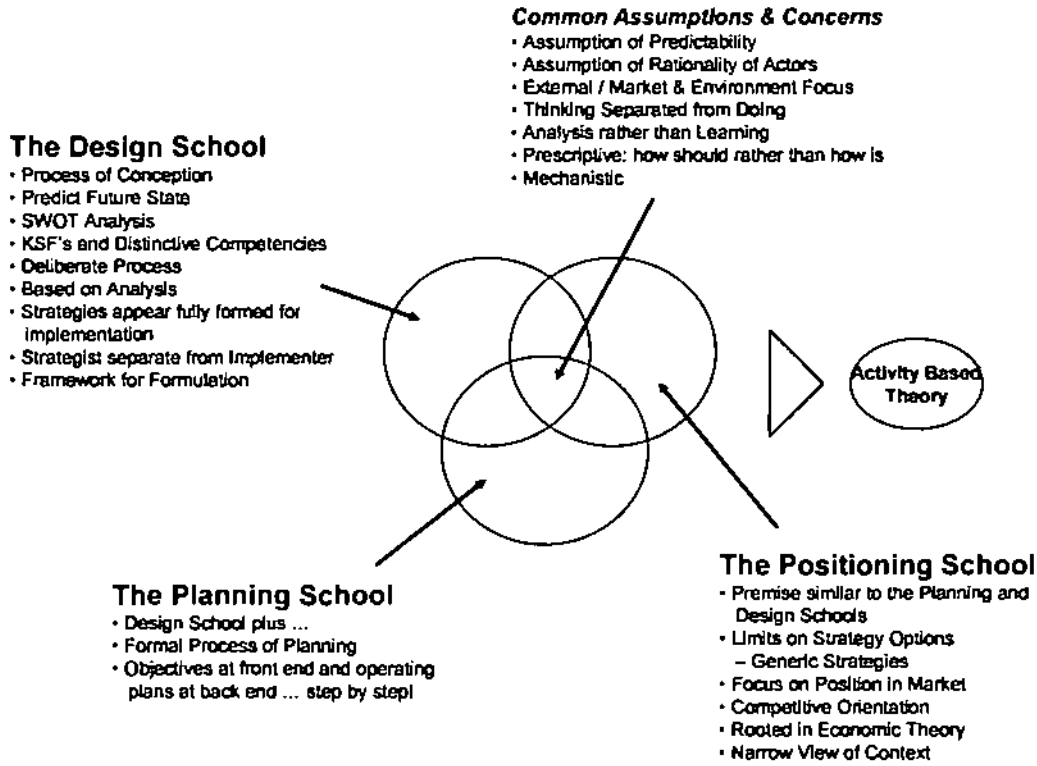


Figure 15: The Structure of the Environmental Perspectives of Strategy

On the other hand, the firm based views draw on theory from, *inter alia*, philosophy, political theory, systems and complexity theory, sociology, cognitive and learning theory, knowledge management, decision theory and economics to explain the strategic behaviour of individuals and organisations. This approach facilitated the development of a number of narrow views on strategy formation that come together in a definitive and cohesive structure when synthesized. In effect, such synthesis provides an integrated firm based theory of strategy formation that explains how organisations generate strategy and strategic behaviour in complex environments (see *Figure 16: The Structure of the Firm Based Perspectives of Strategy*).

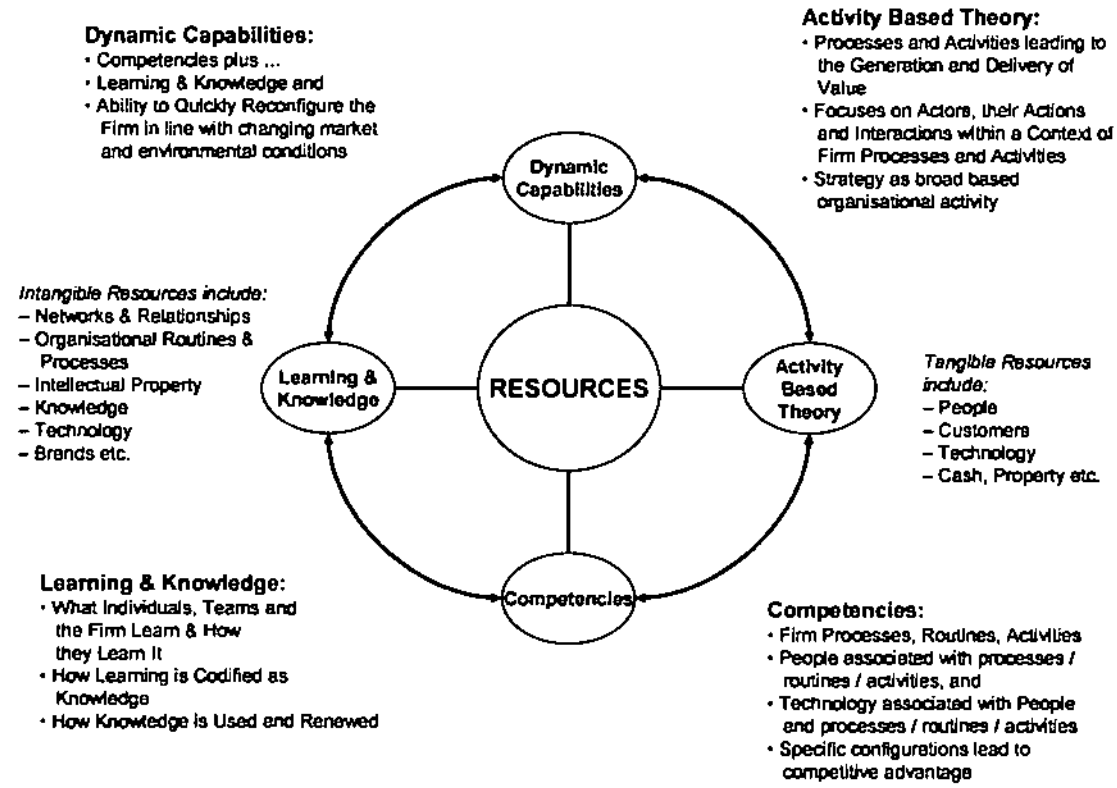


Figure 16: The Structure of the Firm Based Perspectives of Strategy

There is one perspective of strategy that is central to both the external and internal views of strategy, as well as the differences between the views, and that is activity based theory. Activity based theory focuses on the delivery of value in a value system through the processes and activities of the organisation. Regardless of the view or perspective of strategy that is adopted, the strategy that results manifests as value created or destroyed by the organisation. This means that activity based theory is a theory that can, potentially, be used to integrate the different perspectives of strategy into a coherent and cohesive whole.

For analysis in the literature review, however, activity based theory has been included in the firm based views of strategy because it is an integral part of the system that is the organisation. There is, however, another and more important reason for the inclusion of activity based theory in the firm based views. In the environmental view strategy formation and strategy implementation are separated – the assumption in this view is that thinking is detached from acting, that is, conceptualisation is divorced from implementation. This is graphically represented in *Figure 15: The Structure of the*

Environmental Perspectives of Strategy where it can be seen that the activity based theory is separated from the three core environmental views.

It is also necessary to situate the environmental and firm based views in their market contexts in order to understand how these two views fit in and interact with their environments. The market and the wider external environment send signals (may be weak, intermediate or strong signals) to the firm in the form of stimuli. The stimuli initiate action on the signals by the firm. The signals are interpreted by individuals, based on their cognitive structures, within the context of the firms' organisational culture (leads to perception of the nature of the signals on the part of the individual) and internalised within the firm where the appropriate action is taken. In other words, stimuli pass through the cognitive structures of individuals before strategic behaviour is initiated. This concept has been illustrated in *Figure 17: The Interactions of the Environmental Perspectives of Strategy* and *Figure 18: The Interactions of the Firm Based Perspectives of Strategy.*

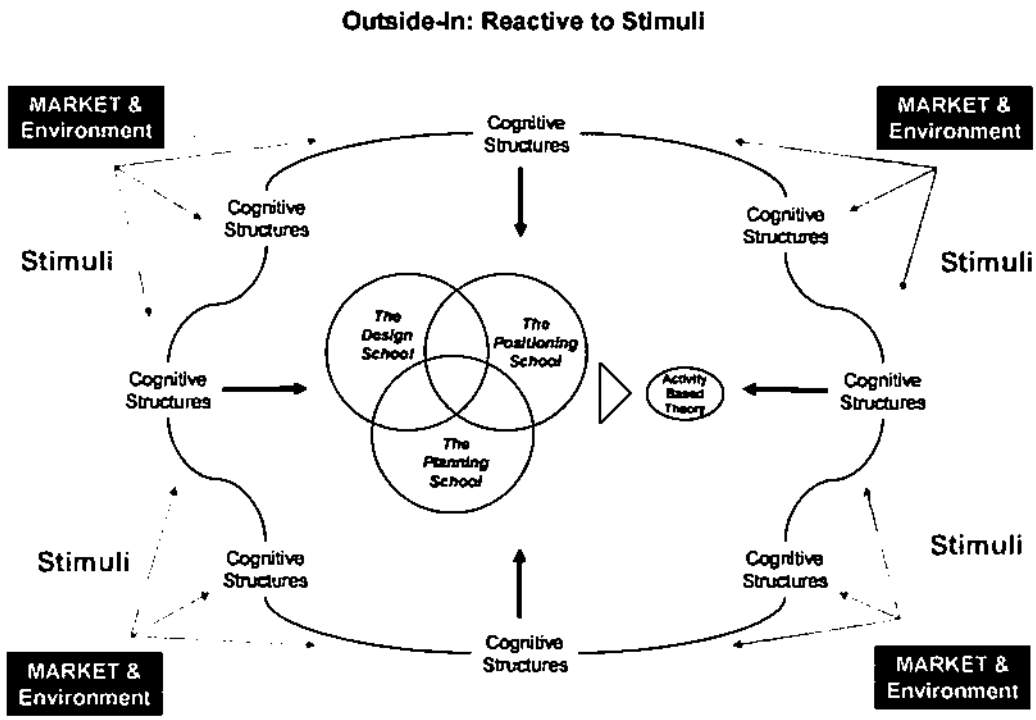


Figure 17: The Interactions of the Environmental Perspectives of Strategy

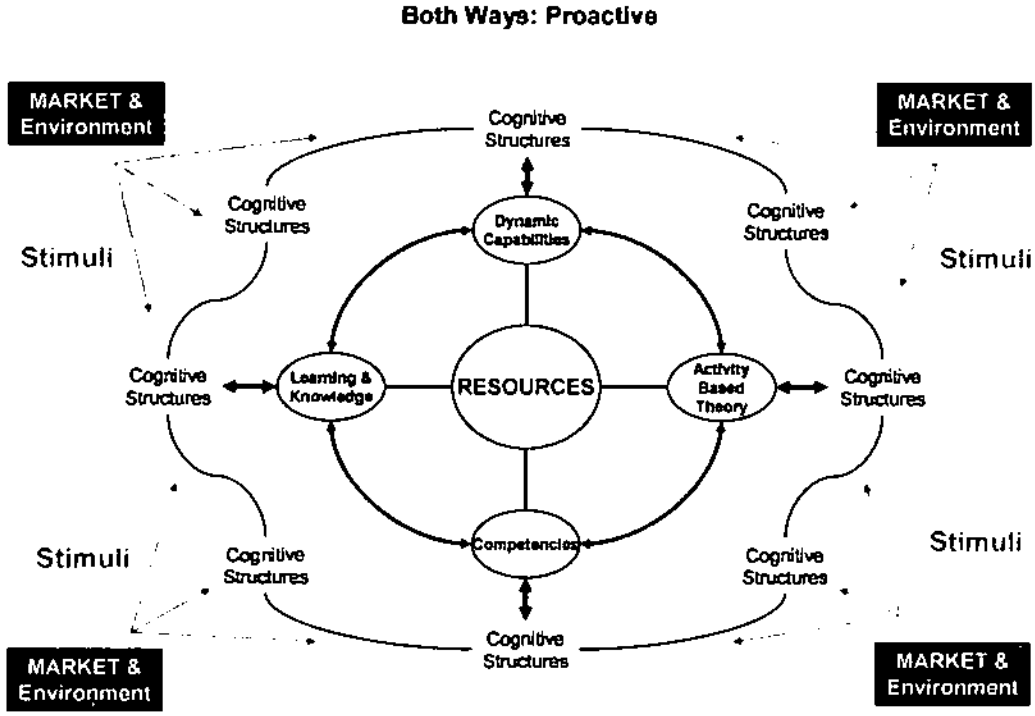


Figure 18: The Interactions of the Firm Based Perspectives of Strategy

Over the past fifteen years there have been a number of attempts at developing an integrated theory of strategy formation and most of these attempts have focused on economics as the foundation for an integrated model (see Barca, 2003 and Mahoney, 2005). Other attempts have configured appropriate firm based theories and linked the configured theories to economic drivers in the environment (see Sanchez, 2003 and Ghemawat, 2001) and used the prescriptive environmental theories and models as analytical tools. It should be noted that there is nothing wrong with this approach it is just that the theory covered in this thesis suggests that it is an incomplete approach.

While the models of the prescriptive environmental theories and the descriptive firm based theories presented above are new and comprehensive, and add to existing theory on integrated strategy formation, in the context of this thesis they should not be seen as definitive integrated models of strategy formation. Rather the structures and interactions of the environmental and firm based views of strategy presented in the models are the first step in a process of developing new theory, and the models provide a foundation on which to build a new and coherent integrating model of strategy formation in organisations. To do this, it is necessary to further explore the nature of strategy, the

context in which strategy takes form, the processes of strategy formation, and the impact of people (with their cognitive structures, learning and knowledge codification capacity and decision making processes) on strategy in organisations.

Chapter 4: TOWARDS AN INTEGRATED VIEW OF STRATEGY FORMATION IN ORGANISATIONS

The increasing complexity, and resultant uncertainty, in business environments over the past thirty five years has been the catalyst for the emergence of a number of new perspectives on strategy formation in organisations. These perspectives have drawn on disciplines as diverse as chaos theory and activity based theory and have necessitated the introduction of a strategy paradigm that provides coherence to an increasingly fragmented strategy discipline.

Mintzberg and Waters (1985) were partially instrumental in beginning the process of transformation in strategy theory with their observations on how *"strategy is formed"* and their identification of *"deliberate and emergent strategies"*. This work drew a distinction between strategy that is realised as planned, and strategy that emerges spontaneously in response to environmental conditions and opportunities. Kiechel (1984), as discussed above, fanned these flames of transformation when he pointed to a study suggesting that only 10% of formulated or planned strategies actually got implemented.

The articles of Mintzberg and Waters as well as Kiechel called into question the efficacy of the unquestioned application of 'prescriptive' environmentally focused approaches to strategic planning that are based on prediction, equilibrium models, the assumption of objective rationality on the part of actors, and the mechanistic and linear view of the worlds of business and organisation. At this time Wernerfeldt (1984) wrote a paper that explored the usefulness of analysing firms from the resource side as opposed to the product / external environmental side, and this seemed to trigger the rise of the organic and evolutionary firm based perspectives of strategy. Following a series of articles by leading academics including Barney (1991), Teece *et al* (1997), and Grant (1991), as well as the popular "Competing for the Future" by Hamel and Prahalad (1994), the firm based views have come to be seen as the dominant views of strategy in organisations (according to Kay, 1998).

However, as we see in the work of Courtney Kirkland and Viguerie (1997), context is crucial to the view of strategy that should be adopted in any given situation, and both the environmental and the firm based views are useful in specific circumstances. While both these views have been discussed in detail above, it must be noted that this discussion did not effectively situate contemporary strategy in the context of complexity and systems theory. In fact there are very few articles and books written that link strategy to a context that is described in terms of complexity and systems theory. It is therefore necessary to turn to the work of Lewin and Regine (2000) and Stacey (2000 and 2003) prior to further development of this thesis.

4.1 The Influence of Context on Strategy Formation: A Systems Perspective

Lewin and Regine (2000: p6) believe that the *"The avenue most relevant to understanding organisational dynamics within companies and the web of activity among them is the study of complex adaptive systems."* According to Lewin and Regine complex adaptive systems consist of a diversity of agents that constantly interact with each other and mutually affect each other. This generates novel behaviour for the system as a whole and can be seen in ecosystems, evolution and the output of the human mind. However, the patterns of behaviour are not constant because changes in the systems environment lead to changes in the behaviour of its agents and, as a result, the behaviour of the system as a whole also changes. This is important because the system is constantly adapting to the conditions around it and, over time, the system evolves through ceaseless adaptation.

Business organisations are also complex adaptive systems (they always have been and will continue to be), and in fast changing business environments need to adapt and be in a state of continual evolution if they are to survive (Lewin and Regine, 2000). Common to the dynamics, both within and among businesses, is the emergence of mostly unpredictable patterns of phenomena that arise from interaction between agents in the system and the connectedness of the system. This, according to Lewin and Regine (2000: p42), leads to a new way of *"doing and being in the workplace of the new economy: in short a new management theory."* The issue, however, is what management practice will nurture process and form in business so that organisations

will naturally be as adaptive and creative as is necessary to thrive in the 21st century environment?

The solution to this issue may be partially found in the work of Stacey (2000 and 2003), who draws on complexity theory, systems theory, psychological and sociological philosophies and frameworks, and the firm based views of strategy to argue for a new approach to strategy that is more appropriate for the uncertainty that will characterise the 21st century. Stacey's argument is that in order to succeed in uncertainty and continual change, organisations need to create new perspectives and learn from the chaos within which they operate.

The central tenet of Stacey's (2000) approach is premised on unpredictability and the limitations of control, and he argues against indiscriminate use of the environmental / rational models of strategy formulation and implementation that arise from the Newtonian paradigm of mechanistic organisation and planning and control. This is done by:

- examining the impacts of the underlying systems, and the psychological and sociological theories within the context of complexity, that give rise to the different high-level strategy paradigms that influence strategy formation in organisations today, and
- emphasising the importance of narrative, conversation and learning from one's own experience as the means by which we can gain understanding and knowledge of strategy in organisations.

Stacey (2000 and 2003) analyses the formulation of strategy, as practiced in organisations today, from two perspectives:

- the systemic nature of populations of organisations and their members, that is, how organisations and the entities of which they consist interact with each other, and
- the sociological and psychological assumptions that are made about the nature of human beings.

Stacey's argument is that different combinations of systems and psychological and sociological theories yield different ways of making sense of life and the dynamics in organisations.

Stacey (2000 and 2003) started by looking at the traditional methods of strategy formation and contends that the prescriptive environmental or rational school of strategy formulation and implementation, which he terms *"Strategic Choice Theory"*, is based on cybernetic systems, cognitive psychology and a touch of humanistic psychology, and is most suitable to *"simple rather than complex environments"* (Stacey, 2000: p29). In this view, psychological theories assuming the primacy of the autonomous individual combined with a theory of interaction between individuals is enacted in a system designed to move to stability in a self regulating manner.

If we change from a cybernetic system, but do not change the psychological and sociological processes associated with it, to system dynamics we end up with the theory of the learning organisation (Stacey, 2000). While this theory pays attention to the same factors that *"Strategic Choice Theory"* is focused on, it also takes cognisance of the uncertainty created by the nature of the system and the need to understand the whole through a process of systems thinking. The purpose of this is to identify points of leverage that will assist in maintaining and/or increasing control of the system. However, organisations evolve and strategies are formed and implemented through a process of learning (Stacey, 2000).

In developing this line of thinking, Stacey identified a combination of open systems theory and psychoanalytic perspectives on the nature of human existence which focused attention on the 'irrational' and 'neurotic' as obstacles to rational decision making and effective task performance. This view points to ways in which learning is negated and strategic choice theory incapacitated, and it provides a segue into a variation of this combination which is the complex adaptive systems approach combined with cognitive and humanistic psychologies. The result of this combination is a focus on the same factors as learning organisation theory. However, the retention of the assumption of primacy of an autonomous individual still mires this view in what Stacey (2000) calls the 'orthodox perspective'.

Stacey is, however, of the view that the formation of strategy is driven by people though a series of complex processes that reflect the complexity, paradox and ambiguity that is

an inescapable part of human existence. Stacey (2000: p348) therefore proposes a theory of human interaction *"where the mind and the social are two facets of the same phenomenon"* and where *"complex adaptive systems coincide with relationship psychology."* Stacey (2000) calls this the theory of *"Complex Responsive Processes"*. This theory abandons the position of the autonomous individual and the position of the objective observer, and replaces these assumptions with those of the simultaneous social construction of group and individual and the position of participative enquiry.

The concept of the complex responsive process is derived from complex adaptive system theory. According to Stacey (2000: p368) complexity theory can be used to provide a framework for thinking about the process of mind and self formation, that is "a great many agents interacting with each other according to their own local rules and in doing so they are adapting to each other". If we think of humans as continuously responding to each other, that is, continuously making gestures that evoke responses from each other, and given that 'responsive' is a more apt term than 'adaptive' when applied to humans, it is more appropriate to refer to complex adaptive systems, where the core of the system is human, as a complex responsive process.

One of the primary characteristics of a complex responsive process is the ability of the actors in a particular scenario to self-organise around an opportunity or threat. The solution that is generated from this self-organisation will be guided by the vision, values, rules and themes that govern the environment in which the self-organisation took place. Complex responsive processes are interacting themes that organise human experience. These themes may be legitimate or shadow, formal or informal, conscious or unconscious. Human behaviour and interaction, in an organisational context, will be governed by these themes, and decisions and actions that shape an organisation will be a reflection of these themes (Stacey, 2000).

Stacey's approach is intuitively attractive: people, organisations and the environments in which these agents exist and evolve are interacting systems within systems, and each of these systems is characterised by the nature of the system and the people / agents that enable it. In organisations the primary enablers of the system are the people within the

organisation and these peoples' interactions with other people, organisations and the environment

4.1.1 The Relationship between the Firm and its Environment

The strategic response of organisations to their environment is multi-faceted and dependant on the environmental conditions in which the organisation operates. So far, in this thesis, we have situated organisations and businesses in simple and complex environments, examined the impacts of complexity and uncertainty in both environments, described the system metaphors that underpin the environment, reviewed the structure of individual and organisational cognition, and provided an overview of the individual and organisational learning theories that facilitate the evolution of individuals and organisations. However, it is also necessary to keep in mind that organisations are social constructions that reflect the culture and circumstances of the environment in which they are situated (Capra, 2002 and Stacey, 2003).

Capra (2002: p79) states that *"The central focus of a systemic analysis is the notion of organisation, or 'pattern of organisation'. Living systems are self-generating networks, which means that their pattern of organisation is a network pattern"*. This idea can be extended to the social domain by identifying the relevant living networks *"as networks of communication."* Social systems produce both non-material and material structures that generate formal and informal rules of behaviour known as social structures, and the processes that sustain a social network are processes of communication which generate shared meaning and rules of behaviour (Capra, 2000). The social domain referred to by Capra must be viewed in a tri-polar context that consists of Government, Civil Society and Business, each of which is both separate and interconnected simultaneously (Perlas, 2000). This has a number of implications for the formation of strategy in organisations.

The convergence of revolutionary political dispensations, cultural integration, innovative economic paradigms, and massive technological change over the past decade has led to a number of new political, social and economic models. These new models represent the strategic response of organisations to the changes in their operating

environments, and account for the new environmental drivers that are shaping the political, social and economic domains in which we live.

As we have seen above, one of the effects of convergence is increasing complexity and uncertainty that arises through the proliferation of interrelationships and this has resulted in many of the new models being based on the use of partnerships, joint ventures, outsourcing and other 'connecting mechanisms' as a surrogate for networks that describe the operational processes of organisations. This is because these 'connecting mechanisms' (referred to as 'partners' or 'partnerships' for purposes of the argument presented in this thesis) are an extremely effective way of reducing complexity and uncertainty. They provide a means of managing interrelationships to achieve the individual strategic objectives of the partners and minimise the risk associated with uncertainty.

While political partnerships have long been recognised as a strategy for advancing local, regional and geopolitical interests of countries, partnerships have only recently been formally incorporated in the strategies of civil and social groups and business entities. One emergent strategic model in the business world is the use of partnerships as a means to achieving economic advantage through collaboration between interested organisations and individuals (Perlas, 2000). The principles of partnership can be extended to bring together political, social, and economic interests to achieve strategic objectives that cannot be achieved by entities in each of these domains alone.

According to Perlas (2000), we live in a *"tri-polar world"* consisting of government, global civil society, and business – each with all their component elements. These three realms together make up the society in which we live. A healthy society is one in which these three realms exist in harmony, and develop their initiatives with full awareness of the initiatives' impact on the other realms. However, if one of these realms dominates interactions, society will suffer and the tri-polar system we live in will be adversely affected. It must be remembered that *"business cannot truly represent the interests of culture or polity"*, nor *"can civil society truly understand the detailed workings of the economy or truly represent the political system"* (Perlas, 2000). Similarly, government cannot "*articulate economic and cultural aspirations*". As such, organisational strategy

in the business world must recognise the reality of our *"threefold"* existence (Perlas, 2000), and incorporate the interests of the political and social domains in its formulation.

Partnerships, by their nature, are social processes born from common interests, recognition that these interests cannot be realised in isolation, and a desire to combine resources and competencies to realise these interests. The concept of *"threefolding"* (Perlas, 2000) *"is first and foremost a social process"*, that has as its objective the sustainable development of the political, social and economic domains. Partnerships and threefolding are therefore complementary concepts where partnerships can be extended, through threefolding, into the realm of the holistic system.

The systemic / networked / threefolding approach to organisations and the environments in which they operate has given rise a number of new trends, which are strategic responses to the complexity and uncertainty in the environment, and are based on the synthesis of operational activities. According to ManyWorlds (2003) one such trend is to synthesize strategy, individual and organisational learning, and decision-making, and to build integrated processes across these knowledge intensive areas. These areas include strategic thinking and strategy formation, organisational development, innovation and knowledge management, organisational learning, strategic marketing, and business network development and management. Fundamental to success in these areas is learning, strategic conversation, and the ability of organisations, like chameleons, to change to meet the circumstances of their environments.

At a micro-economic level, it must also be remembered that firms exist in a systemic relationship with the markets they target with their products and services. Markets are living systems and, as such, consist of *"networks of processes in which every process contributes"* directly or indirectly *"to all other processes"* in an ever-dynamic structure that constantly seeks its own self-renewal Capra (2002). This living system, the market, will be shaped by its dynamics and characterised by the level of complexity and uncertainty that exists in the system.

The Firm is a System, as is the Market and the Environment in which the Firm and the Market exist

The boundaries of the Environment and Market will shift in accordance with the characteristics of these two systems

The Firms' Strategy and Strategic Posture will determine the boundaries of the Firm and its interaction with the Market and the Environment. In this way the Firm may also change the boundaries of its Market and its Environment

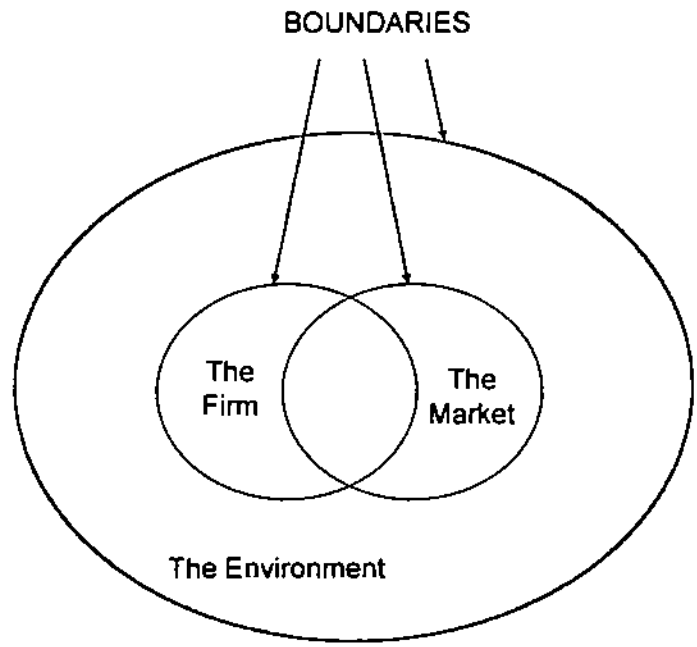


Figure 19: Systems, Boundaries and the Impact of Strategy on the System

This gets to the heart of the question of how to define the firm, its markets and its environment within a systemic context. According to Slater (2003: p47) this is "*more complicated than might immediately appear ... to examine the factors which constrain the size and range of activities of firms; to compare the nature of relationships within firms with relationships between firms*", and to establish the nature of the relationships between the firm, its markets and the environment in which the firm and its market/s exist.

To address this "*complicated*" issue, Slater (2003) turns to theory on the boundaries of the firm to provide some guidance. Slater presents a number of views on how the boundary of the firm is drawn including legal boundaries, Coase (1937) and Richardson's (1972) resource based view that there is a natural and optimal division of labour and resources between firms and markets based on the relative costs of each method of resource allocation, and Williamson's (1985) transactions cost theory premised on the behavioural assumptions of 'bounded rationality' and 'opportunism'.

However, the most relevant theory to this thesis is Lewin and Regine's (2000) view, discussed above, that systems consist of a diversity of agents that constantly interact with each other and mutually affect each other. This interaction can be extended into the formation of strategy where strategic decisions taken by agents within the firm can change the boundaries of the firm. For example, where a new product is to be introduced into a new market segment. This has a 'knock-on' effect in that changing the firm boundaries through the introduction of a new product will lead to a change in the market boundaries by increasing the size and number of market segments addressed, and may lead to a change in the environment boundaries as well through, for example, different legislative requirements for the product.

It should also be noted that while the strategic decision making process within the firm can change the boundaries of the firm, it also generates novel behaviour for the system as a whole. This can be seen in firm, market and environmental evolution where the patterns of behaviour within the whole system are not predictable because changes in the systems total environment leads to changes in the behaviour of its agents and, as a result, the behaviour of the system as a whole also changes. This is particularly important because decisions and actions that are taken at a firm level will result in responses from other agents in the whole system that take the form of decisions and actions and, through this mechanism, what is perceived to be strategic emergence occurs.

4.1.2 The Firm's Response to Stability, Complexity and Everything In-between

As we have seen above we live with increasing complexity and constant uncertainty, and the 'traditional' approaches (mechanistic and linear) to strategy are no longer as relevant as they were prior to the last third of the 20th century when globalisation, the availability of information, and technology became the major drivers of constant change. However, this does not mean that 'traditional' strategy has no place in this 'new' world. Brown and Eisenhardt (1998: p3) state that *"It is not that traditional strategies are wrong but rather that they are just not enough in industries with intense, high velocity change."* As such, complexity theory does not replace mechanistic management; it

simply encompasses it in a larger context. The view, therefore, that organisations operate and succeed in simple and relatively stable environments is as incomplete as the view that all environments are complex, dynamic and uncertain.

In an effort to seek an empirical balance between the polarities of stability and dynamism, certainty and uncertainty, Courtney, Kirkland and Viguerie (1997) suggest that organisations operate at different points (sometimes simultaneously) along a spectrum with simple linear environments and complex nonlinear environments at the opposite extremes.

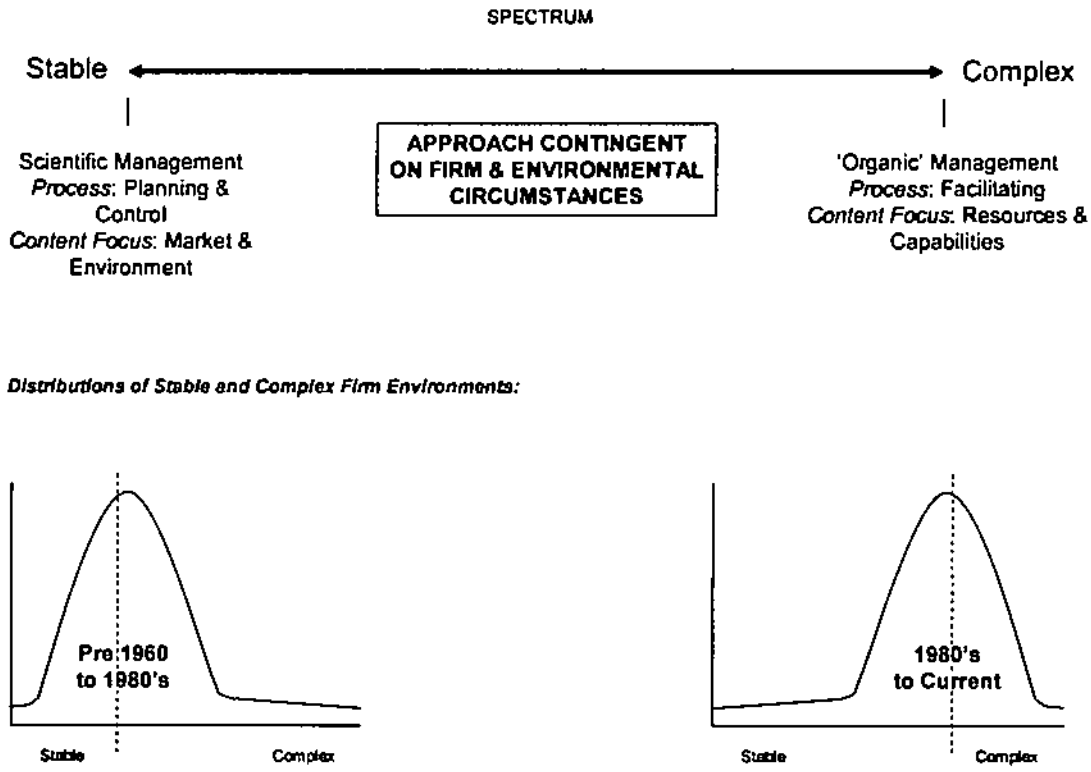
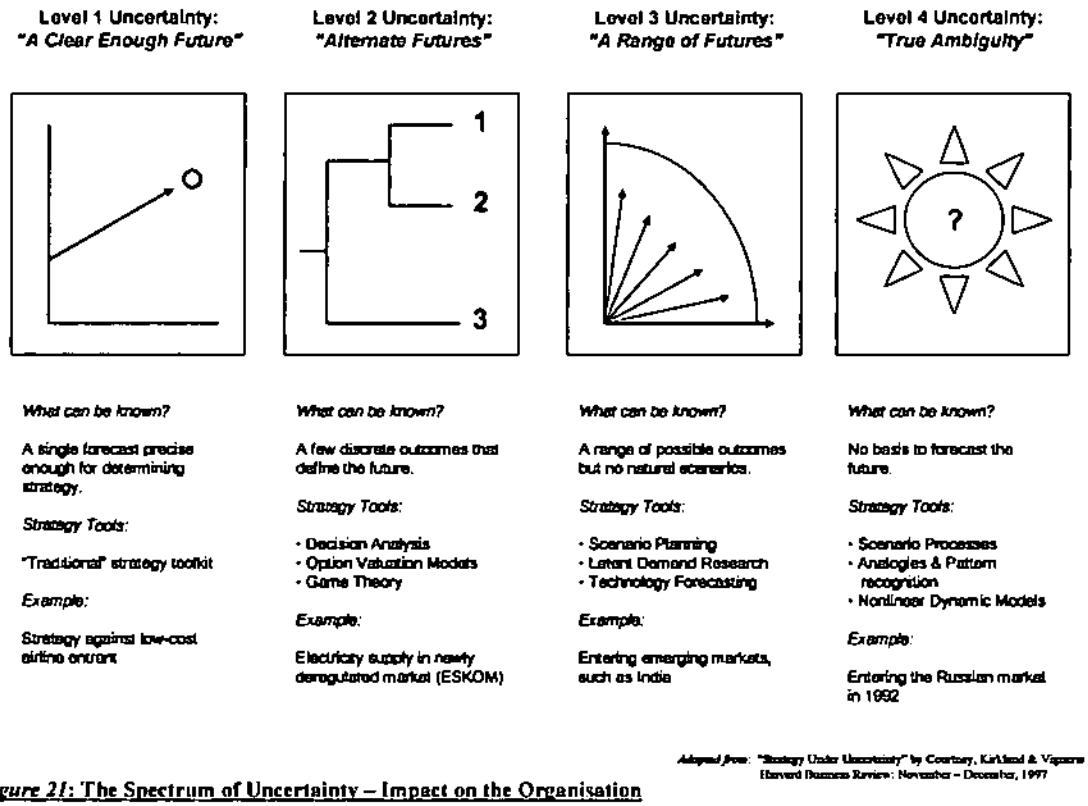


Figure 20: The Spectrum of Uncertainty – From Stability to Complexity

Consequently, Courtney *et al* (1997) have identified four discrete points along this spectrum to illustrate *"what makes for a good strategy in business environments"* facing different levels of uncertainty. To do this they have described the operating environments associated with each of the four points, identified the strategy philosophies, techniques and tools most appropriate for each operating environment, and provided examples of situations that would likely occur at each of the four points.

Figure 21: Spectrum of Uncertainty – Impact on the Organisation illustrates the levels of uncertainty proposed by Courtney *et al* (1997):



Adapted from: "Strategy Under Uncertainty" by Courtney, Kirkland & Viguerie Harvard Business Review: November – December, 1997

Figure 21: The Spectrum of Uncertainty – Impact on the Organisation

At *Level 1* managers can develop a single forecast of the future that is accurate enough to provide a sound base for the development of strategy. Although *"it will be inexact to the degree that all business environments are inherently uncertain, the forecast will be sufficiently narrow to point to a single strategic direction"* (Courtney *et al*, 1997: p67). Uncertainty at this level is minimal and a *Level 1* situation manifests where there are few strategic variables to consider and information about the variables is accessible.

The increase in uncertainty associated with *Level 2* leads to a situation where the future can be described as one of a few alternative outcomes, or *"discrete scenarios"*. Analysis cannot identify which outcome will occur but it can help to establish probabilities for each of the outcomes. According to Courtney *et al* (1997), a classic *Level 2* situation is where the possible outcomes are discrete and clear, it is difficult to predict which one will occur, and the best strategy depends on which one does occur. At *Level 2* the primary uncertainty arises in oligopoly markets where strategic decisions are contingent on the actions of competitors.

A range of potential futures present themselves as the uncertainty increases to *Level 3*. "*The range is defined by a limited number of key variables, but the outcome may lie anywhere along a continuum bounded by that range.*" In this situation there are no natural "*discrete scenarios*" (Courtney *et al*, 1997: p70). Companies in emerging industries or entering new geographic markets often face *Level 3* uncertainty.

At *Level 4* uncertainty organisations are entering the realm of "*true ambiguity*". Multiple dimensions of uncertainty interact to create an environment that is virtually impossible to predict. It might not even be possible to identify all the variables that will define the future and, consequently, the range of potential outcomes cannot be identified. These situations are rare, according to Courtney *et al* (1997), and tend to migrate to one of the other three levels as information becomes available. Organisations considering entering the Russian market in 1992 faced this type of uncertainty.

While the Courtney *et al* (1997) framework is very useful in providing guidance to those seeking to analyse situations and optimally inform the strategic decision making process in organisations, it also has the effect of categorising the theories, frameworks, methods and tools. This suggests that each of the theories, frameworks, methods and tools are only applicable in specific environmental contexts and are, therefore, narrow in their application and perspective. As such, the observations by the numerous academics and practitioners (discussed in the introduction to this thesis) that the many narrow perspectives of strategy formation lead to the perception that the strategy discipline is highly fragmented are validated by Courtney *et al*'s work.

More importantly, for the development of the argument in this thesis, the Courtney *et al* (1997) framework can be situated in systems theory in that the context, both internal and external, can be described as a system with one or more sub-systems. Furthermore, the nature of the context or system will be determined by the actors' perceptions of the context or system. Since understanding the context is fundamental to the formation of purpose or intent, and the formation of strategy to achieve such purpose or intent, the core process of any strategy formation must involve individual and organisational cognition. This idea is explored in *section 4.1.3 Environmental and Organisational*

Stimuli: Through the Lens of Perception and *section 4.2 The Primacy of Individual Cognition and Organisational Posture* below.

4.1.3 Environmental and Organisational Stimuli: Through the Lens of Perception

A theme that clearly emerges from the research conducted for this thesis is that complexity and uncertainty in the markets / operating environment of organisations will, in most cases, determine the type and nature of the strategic response from the organisation. The form this response takes will be determined by the mental models, beliefs and cognitive biases of individuals (the cognitive structures), and the political and sociological structures and culture in the organisation.

For example, an organisation will be inclined to adopt a traditional strategic posture, possibly based on Taylor's (1947) 'scientific management' principles and an environmental view of strategy formulation, where low market and environmental complexity will lead to a stable, and generally predictable, operating environment. Similarly, an organisation will likely adopt more dynamic strategic postures where complexity and uncertainty in the markets / operating environment is high (Courtney *et al*, 1997 and Stacey, 2003). In such circumstances one would possibly find the use of scenario planning and an emphasis on the firm based views of strategy.

This fits with the concepts that underlie evolutionary theory. If the organisation is not aligned with the markets and environment in which it operates, it will become dysfunctional and will probably cease to exist. Conversely, if the organisation is tightly aligned with the environment in which it operates it dramatically increases its chances of success - subject, of course, to the industry structure and competitive environment in which it operates.

Industry structure and the competitive environment have to be seen in the context of the theme identified above. The systemic nature of markets, operating environments, business entities, competitive environments and industry structures suggests that an established industry would have come into existence because it was aligned with a particular market requirement and operating environment. As such, it will reflect the

dynamics of the market it addresses and will play a part in determining the strategic posture of firms within the industry. In this regard, it can be argued that some firms in an industry achieve success because they adopt a strategic posture that breaks the industry mould. However, a counter argument would be that it was the existence of the industry mould in the first place that allowed the firm to differentiate itself for success. Interestingly, the strategic posture and resultant actions of the firm will cause the system that is the industry, the competitors, the market and operating environment to evolve and accommodate the various postures of the players in the industry.

In effect, any changes in the system that is the environment such as the market, industry and competitive environments will result in a disturbance in the inter-relationships, patterns and trends that characterise the system. This sends off signals that are picked up by the individuals' scanning mechanisms (intuitive and / or learned) and these signals act as stimuli for consideration on the part of the individual.

Through this process the individual is able to establish whether the stimulus constitutes an opportunity or a threat and can take action either as an individual or can socialise his perception of the stimulus in the organisation. It must be noted that the decision to take action can include not taking any action. For purposes of this thesis the process that takes the individual from stimulus to the determination that the stimulus is an opportunity, a threat, or can be ignored, is referred to as 'The Lens of Perception'.

The acts of recognising a stimulus, consideration of the stimulus, and deciding whether to ignore the stimulus or categorise it as an opportunity or threat, will be biased by the cognitive structures that characterise the individual. These cognitive structures consist of, *inter alia,* mental models, values and practices (culture), beliefs about strategy and organisation, and beliefs about the market, competitors and the environment.

4.2 The Primacy of Individual Cognition and Organisational Posture

Hodgkinson (2001: p417) observed that the "*range of issues that can be legitimately addressed from a psychological perspective is potentially as broad as the entire field of strategic management itself, covering all aspects of strategy formation, choice and*

implementation". Mintzberg *et al* (1997: p150) elaborate on Hodgkinson's (2001) observation in stating that if "*we are really serious about understanding strategic vision as well as how strategies form under other circumstances, then we had better probe into the mind of the strategist.*" If Hodgkinson (2001) is correct in his view that the psychological perspective, or human cognition, is as broad as 'the entire field of strategic management' Mintzberg *et al*'s (1997) comment is much more than a simple observation – the comment goes to the very essence of strategy formation and impacts every perspective that has been discussed in the Literature Review.

Despite the academic development and extensive body of literature on systems theory, discussed in section 4.1 above, and cognitive theory in the disciplines of psychology and sociology, both systems theory and cognitive theory have been limited in their application in strategy theory. This has been noted by both Stacey (2000 and 2003) and Mintzberg *et al* (1997) who argue that both the environmental or prescriptive schools and the firm based or descriptive schools of strategy formation have been more concerned with the requirements for thinking than with the thinking itself. This has led to the situation where we are still "*far from understanding the complex and creative acts that give rise to strategies*" (Mintzberg, 1997: p150).

What is of particular interest is that the study of cognition and its role in strategy formation has attracted a number of researchers and academics who have worked on the impact of cognition on strategy formation in association with established schools in the environmental and firm based perspectives of strategy formation. This suggests that there is a broad-based agreement on the idea that cognition is fundamental to all strategy perspectives, theories, frameworks, methods and tools, and one without the other becomes meaningless – each is necessary to inform the other in an iterative and symbiotic relationship that generates strategy.

This perspective is supported by Mintzberg *et al* (1997: p151) who, while noting that cognitive theory is not so much "*a tight school of thought as a loose collection of research*", states that cognitive research serves "*as a kind of bridge between the more objective schools of design, planning, positioning and entrepreneurial, and the more subjective schools of learning, culture, power, environment and configuration*". Given

all the above, cognition can therefore be seen as the 'golden thread' that holds strategy theory together and is central to the development of a coherent integrating theory of strategy formation.

4.2.1 Cognition and Strategic Behaviour

Cognition manifests in the organisation as strategic behaviour through the processes of strategy formation, decision making and strategy implementation. The process of strategy formation which propels actors in the organisation to the point of decision that leads to organisational activity is the product of two levels of cognition:

- at the primary level there are the cognitive structures of individuals (specifically mental models, beliefs and assumptions) that will determine individual behaviour in an organisation, and
- at the secondary level there is organisational culture that will structure and facilitate individual behaviour to meet the objectives of the organisation.

The act of taking a decision is the catalyst for organisational activities that take form as intended or emerge in accordance with, and in response to, unforeseen organisational and environmental circumstances. As such, the decision is the point at which strategy formation becomes strategy implementation.

It is important to note that the separation of cognition into an individual and organisational level is artificial in that the individual is part of the system that is the organisation, and organisational culture which is in effect organisational cognition, shapes individual cognition. However, individual behaviour arising out of cognition is a primary determinant of culture in the organisation. It is, therefore, only for purposes of analysis that this separation is helpful.

The ability of individuals to 'know' is referred to as individual cognition. The 'knowing' embedded in an organisations' codes of behaviour and organisational routines, being the sum of all the individual cognition in the organisation and the interactions of these individuals, is referred to as organisational cognition or organisational culture. Strategic perception and reasoning in an organisation is subject to

the rationality of each of the actors in the organisation and the rationality of the organisation as determined by its culture.

The processes and activities relating to the acts of perception and reasoning are known as cognitive activities and are "*mental tasks intended to increase the strategist's*" and the organisation's "*knowing*" (de Wit and Meyer, 2004: p52). These processes and activities include making sense of phenomena and stimuli created by significant disturbances in the systems in which the individual is an actor, attaching meaning to the phenomena and stimuli at an individual and organisational level, analysis and synthesis of phenomena and situations consisting of a number of interrelated actors and phenomena, conceiving strategic options and making decisions.

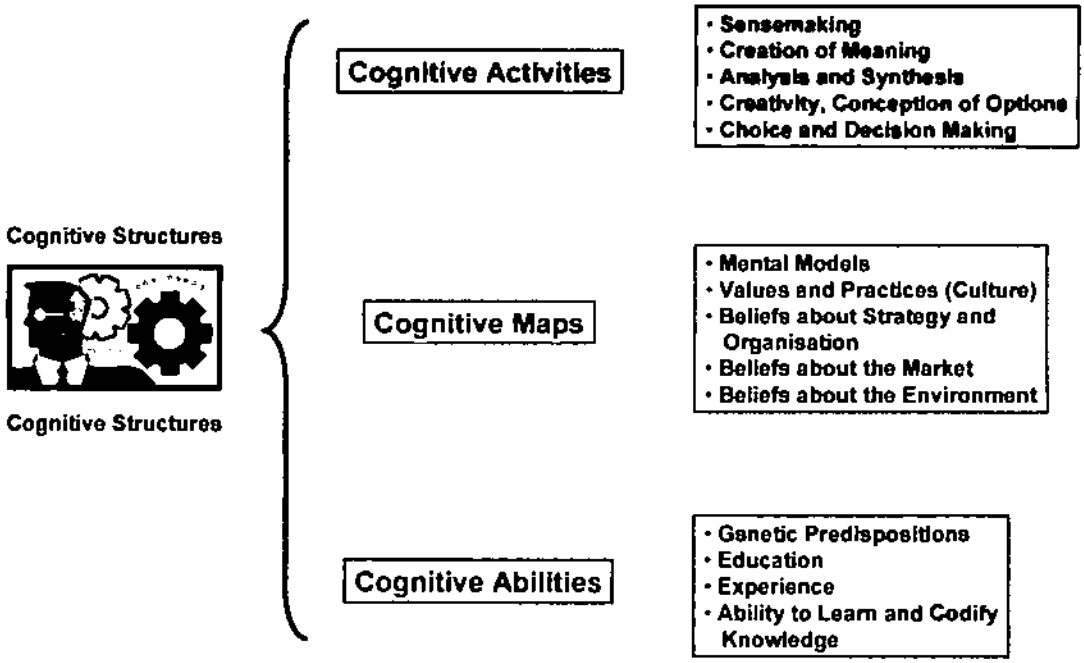


Figure 22: The Individual's Cognitive Structure

Cognitive activities are unique to each and every individual and organisation and are premised on the cognitive maps that define and shape the individual and the organisation, and the individual and organisational response to environmental stimuli. This can be seen in the Hodgkinson and Johnson (1994) study which clearly shows that mental models in competitive situations vary widely in detail and depth, and Porac and Thomas (2002: p168) observations that elements of the individuals cognitive map,

which they refer to as "*cognitive content*", can be learned through professional and educational experiences, and cognitive content, structure and style affect not only perceptions, interpretations and processing of information but also the ability to frame strategic problems and devise strategic choices.

Much has already been written in this thesis about how mental models, values and practices, and individual and organisational beliefs form and are inter-related in section *3.4: Cognition and Decision Making*, and it not necessary to review this work in this section, but it is important to note that cognitive maps are premised on the cognitive abilities of the individual. These cognitive abilities, consisting of the sum of an individuals' genetic predispositions, education, experiences, ability to learn and codify knowledge, and the interactions between these phenomena, determine the form and content of the individuals cognitive map or worldview.

It must be remembered that the world can be viewed objectively, based on the objective rationality of individuals and organisations and the common perception of phenomena, and it can be seen subjectively, based on individuals and / or organisations subjectively rational interpretations of the world. It is rare that individuals decide and act in a purely objective or purely subjective fashion and, in most cases, objective and subjective rationalities are mixed up to provide each individual with different perspectives on environmental and organisational stimuli and the appropriate responses to these stimuli.

The cognitive structures of the individual and organisation will determine the degree of objective and subjective rationality that it applied to phenomena and the nature of reality. These ideas are particularly visible in Simon's (1955 and 1956) concept of 'bounded rationality', and the culture, mental models, learning theory and cognitive bias work of, *inter alia*, March and Simon (1958), Schwenk (1984), Senge (1990), Weintraub (1995), and Capra (2002) where it is apparent that rationality and reality is as subjective and unique as the cognitive structures of each individual and organisation.

From an organisational perspective, Mintzberg (1983) and Pettigrew (1985) emphasize that the framing of strategy takes place in an organisational, social and political context and that the art of devising strategy is, inherently, a political process. In an

organisational context one or more 'strategists', each an individual with different mental models and beliefs, will form strategy, take decisions and implement strategy. The key consideration in such situations is how to aggregate and integrate the individual belief structures to achieve team and organisational mental models.

Daft and Weick (1984) argue that organizations are interpretation systems that collect information from the environment, incorporate the information into the organizations shared beliefs and routines, interpret the information, and act on the information that has been through the individual and organisational cognitive processes in the course of adapting to the environment. Such action then provides input for additional information, interpretation and learning. Since all levels in an organization have environmental scanning and decision making responsibilities, to different degrees, all are involved in enacting the organisations environment and incorporating external information into its collective cognitive structures.

In section *4.1.3 Environmental and Organisational Stimuli: Through the Lens of Perception* we noted that changes in the system that is the environment such as the market, industry and competitive environments will result in a disturbance in the inter-relationships, patterns and trends that characterise the system. We also noted that the changes send off signals that are picked up by individuals and that these signals act as stimuli which cause the individual to react by considering the implications of the signal. It at the point of the stimulus that cognition and cognitive structures start to play a critical role in strategy formation.

The acts of recognising a stimulus, consideration of the stimulus, and deciding whether to ignore the stimulus or categorise it as an opportunity or threat, will be the result of the signals being interpreted by individuals, based on their cognitive structures, within the context of the firms' structures, technology and organisational culture. As such, the stimuli must pass through the cognitive structures of individuals and be recognised as a strategic issue requiring action before a process of strategy formation is initiated.

This process starts with recognition and is followed by a non-sequential series of thinking activities that involve making sense of the signals, attaching meaning to the

signals, sub-processes of analysis and synthesis of the signals, and formation and conceptualisation of strategic options. All or part of these cognitive activities may be taking place simultaneously or the sequence may be random, but each of these activities plays a part in the process that is strategy formation. As such, the thinking process, described here as cognitive activities, is the core process for strategy formation.

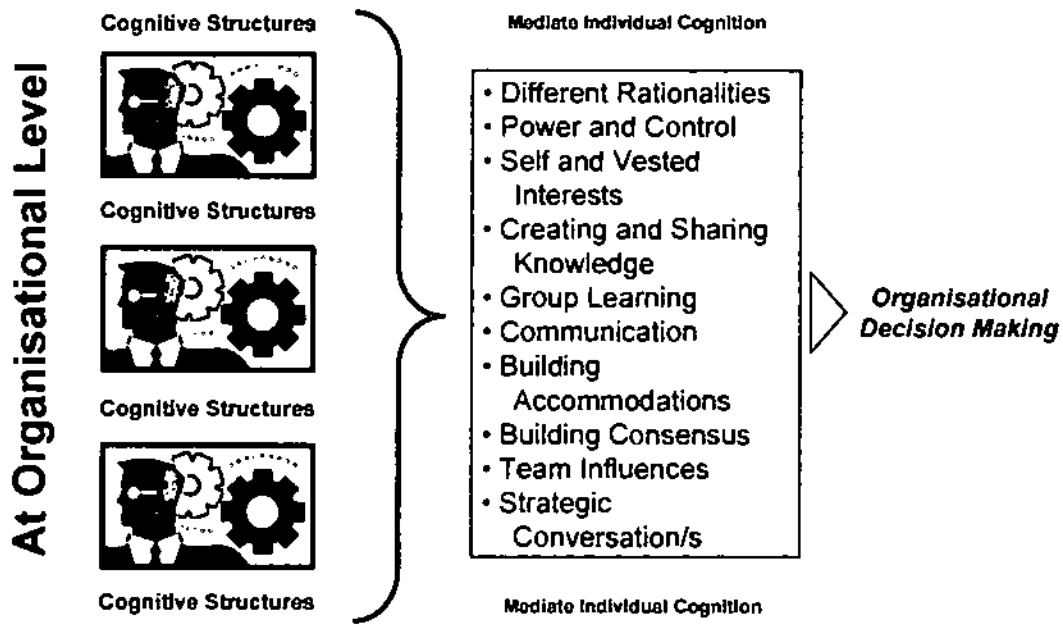


Figure 23: The Individual Cognitive Structures are Mediated by Organisational Structures

It is necessary to keep in mind that there are two levels of cognition: a primary level being the cognitive structures of individuals, and a secondary level being organisational culture which will structure and facilitate individual behaviour to meet the objectives of the organisation. This can be seen in *Figure 23: The Individual Cognitive Structures are Mediated by Organisational Structures*, where the organisational structures, roles, social structures and environment, technology and routines will shape individual behaviours in the form of decisions and activities.

Each of the 'mediating elements' in *Figure 23* have been discussed in The Literature Review and will not be discussed here. Suffice to say that while the core process for strategy formation is cognition, it must always be remembered that cognition has two inextricably bound and interrelating layers in an organisational context – the individual

and the organisational layer of cognition. Strategy must account for both layers in the processes of strategy formation, decision making, and implementation (as described in activity based theory).

4.2.2 Culture and Worldview: Making Sense of Phenomena and Creating Meaning

As we have seen above, systems theory is one of the cornerstones of organisational theory and the theory underlying strategy formation and decision making in organisations. We also saw the use of metaphor as a means to understanding simple and complex systems and the characteristics that are displayed by actors in the system. In this regard, the processes of strategy formation and decision taking, when viewed in a systemic context, are best described by the cultural and political systems metaphors

The cultural metaphor offers new perspectives on the strategic posture that is adopted by an organisation, how to effect organisational change, and the value of diverse cultures and beliefs. It also provides insight into how culture, and the management of culture, can have a positive evolutionary impact on organisations and stimulate innovation.

Culture is best understood as the often unspoken but familiar ways of thinking and acting that exist in all firms and enterprises. According to Flood and Jackson (1991: p12) *"culture is a shared reality, or a socially constructed reality (of values and beliefs), that deems certain social practices to be normal, acceptable and desirable."* Culture is important in all organisations because it determines what strategic posture an organisation will adopt, and how the organisation will react to change and what change will be considered feasible. As such, culture can act as a restraining force or as a force for innovation and evolution.

The cultural metaphor needs to be adapted to account for the effect that politics will have on the culture in an organisation. This effect is described by the political metaphor which sees the relationships between individuals and groups as competitive and involving the pursuit of power. It highlights all organisational activity as interest based and emphasises the key role of power in determining political outcomes. Industrial relations literature and theory states that there are three contrasting views on the

character of any political situation and these are labelled: unitary (a team metaphor), pluralist (a coalition metaphor) and coercive (an authoritarian metaphor).

Both the cultural and political systems metaphors describe the development of individual and organisational mental models that are primarily responsible for behaviour and actions in an organisation. As discussed in the Literature Review, mental models are the deep-rooted assumptions and guiding ideas that exist in our minds and that determine how we interpret circumstances and events around us, that predispose us to expect certain results, and that guide our behaviour and actions. These mental models can limit our thinking because they are the source of perspectives, cognitive filters, recipes and biases, but they can also expand our thinking if the mental model leads to exploration and is open to its environment.

Although mental models are generally thought to exist only at the individual level, they in fact also exist at organisational and community levels. As people work together and share experiences, it is inevitable that they begin to develop consensual views of the future. This is particularly relevant in older, larger organisations where success tends to lead to more defined and entrenched mental models. Entrenched models run into problems where the 'recipe' may once have been built on 'rules' that functioned well but both the rules and recipe are now becoming obsolete.

As we saw in the Literature Review and in *section 4.2.1: Cognition and Strategic Behaviour*, individual and organisational cognition will shape and drive the organisational response to stimuli emanating from the system. The organisational response, in the form of decisions, will be determined by the sense that is made of the stimuli and the meaning the individual and the organisation attach to both the stimuli and the response.

In *section 3.4.1 Cognition, Mental Models and Sense-Making*, Weick's (2001) concept of sensemaking was explored and it was noted that sensemaking is well named because it literally means the making of sense. Sensemaking involves placing stimuli into a framework, otherwise known as a cognitive structure, which is a generalised point of view that directs interpretations. This view is supported by Starbuck and Milliken (1988,

p51) who state that people put stimuli into frameworks to enable them "*to comprehend, understand, explain, attribute, extrapolate and predict*".

Both Sackman (1991: p33) and Porac *et al* (1989) argue that sensemaking and the creation of meaning are symbiotic concepts and that one cannot take form without the other. Sackman talks about sensemaking mechanisms that organizational members use to attribute meaning to events - mechanisms that "*include the standards and rules for perceiving, interpreting, believing, and acting that are typically used in a given cultural setting.*" and Porac asserts that meaning is created when cues are linked with well-learned and/or developing cognitive structures – sensemaking being a mechanism for creating meaning in the mind of the individual. This meaning will be created in the mind of the individual and the culture of the organisation by the individual's cognitive structures including intuition, the learning coming from experience, mental models, processes of synthesis and analysis, and the individuals' worldview.

A worldview is embedded in the cognitive structures of the individual and can be described as the philosophical foundation on which the cognitive structures are built. The worldview will shape cognitive structures and, ultimately, perception and cognitive processes and will therefore determine how sense is made and meaning is attached to phenomena. The prevailing philosophies in organisational theory, defined in *Definitions and Notes* above, are 'Modernism', 'Symbolic Interpretivism' and 'Postmodernism', and each has different implications for the way people will perceive and respond to stimuli.

The Modernist philosophy views organisations as objectively real entities operating in a real world and these entities are driven by objectively rational actors who will seek effectiveness and efficiency in all organisational activity. The focus of organisational activity is on finding universal laws and methods that will lead to rational structures and standardised processes that will give management control of their environment. Individuals and organisations with a Modernist philosophy will tend to draw on the prescriptive environmental theories of strategy formulation in response to organisational and environmental stimuli and will make sense of and attach meaning to stimuli in accordance with these theories.

According to Hatch and Cunliffe (2006: p14) the philosophy of Symbolic Interpretivism takes a subjective view of organisations where the organisation is continually constructed and reconstructed by members through "*symbolically mediated interaction*". As such, organisations are socially constructed realities where meanings promote and are promoted by understanding of self and others within the organisation. The focus of this philosophy is on how people give meaning and order to their experiences within different contexts through interpretive and symbolic acts. Individuals and organisations with a Symbolic Interpretivist philosophy will root their response to organisational and environmental stimuli in firm based theories of strategy formation and, in accord with these theories, will make sense of and attach meaning to stimuli.

The Postmodernist philosophy is based on the view that there is no independent reality, meanings cannot be fixed, there are no facts only interpretations, and knowledge is a power play. In this view organisations are sites for irrationality and enacting power relations and the focus of the philosophy is on encouraging reflexive and inclusive forms of theorising and organising, and surfacing marginalised and suppressed viewpoints. This is the philosophy of individualism and the role and impact of the individual within systems and networks. Responses to stimuli in this view will be unpredictable and will draw on whatever theories that will advance the individuals' interests.

It can be argued that individuals in an organisational context unconsciously incorporate elements, to different degrees, of all three philosophies in their cognitive structures and their responses to stimuli. This adds to the uniqueness of each individual and explains the huge variety of behaviour both within and across organisations.

In an organisational context, cognitive structures at the individual and organisational levels are guided and shaped by the dynamics of the market and operating environment in which the individuals and organisations are actors. The operating environment will include the industry and competitive environment in which the actors find themselves. Within this context, the single most important element in shaping cognitive structures is the individual and organisational learning models that characterise the organisation.

The organisations strategic posture, in terms of its response to environmental and organisational stimuli, is therefore determined by the worldviews and cognitive maps of the actors and how sense is made of and meaning is attached to phenomena. Given the dynamic nature of living systems these worldviews and cognitive maps will continually change and evolve as new agents and events are introduced to the system - provided that individual and organisational learning takes place. This learning will generally occur in accordance with one or more of the learning models discussed in *section 3.3: Individual and Organisational Learning: Context and Theories.*

4.2.3 The Learning and Knowledge Profile: A Basis for Evolution

The value of learning in generating competitive advantage has been repeatedly emphasised by both academics and practitioners over the past decade and, according to Kirjavainen (2001), "*the ability to learn faster than competitors may well be the only sustainable competitive advantage*". For Penrose (1959), Barney (2002), Teece *et al* (1997), Kirjavainen (2001) and Sanchez (2003), firms compete for resources, core competencies and dynamic strategic capabilities that they embed in the organisation and develop over time through collective learning processes. This learning provides the firm with sustainable competitive advantages.

In the 1980's the planning function for the Shell Group of companies conducted a survey of 30 companies that had been in business for more than 75 years. The objective of the survey was to build an understanding of the factors that led to these companies' longevity and prosperity over a time-span that had not only seen the rise and demise of countries, but had also seen the disappearance of many prominent and supposedly well-established companies. It is worth noting, for context, that the 75 plus years of the 30 companies' existence had been characterised by more uncertainty, change and environmental turbulence than any other 75 years of recorded human history.

In 1988, on completion of the survey, Arie de Geus (de Geus, 1988), then Head of Group Planning for Shell, wrote that the most impressive finding of this survey was the ability of the companies to live in harmony with their business environments. They were

able to seamlessly switch from a survival mode when times were turbulent to a self development mode when times were favourable. de Geus (1988) noted that *"Outcomes like these don't happen automatically. On the contrary, they depend on the ability of a company's senior managers to absorb what is going on in the business environment and to act on that information with the appropriate business moves. In other words, they depend on learning"*.

In contrast, this same study found that the average life expectancy of Fortune 500 firms, from birth to death, was only 40 to 50 years - the vast majority of the companies perishing before their 50th birthday. These companies, according to de Geus (1997), suffer from learning disabilities and are not able to adapt and evolve as the world around them changes.

The learning that de Geus (1988, 1997) is talking about is organisational learning – the process whereby *"management teams change their shared mental models of their company, their markets, and their competitors."* This view of de Geus (1988) is supported by Galer and van der Heijden (1992) who wrote *"In business, learning is a process through which management teams change their 'mental models' of"* the way their company operates, *"their markets and their competitors"*.

It is the focus on internal configuration as well as the market and competitors, all being essential components of strategy and all constantly evolving, that leads to the proposition that strategy formation and strategy implementation can be thought of as a process of learning (de Geus, 1988). Interestingly, de Geus sees scenario planning as a process of learning about the future.

The development of strategy in organisational contexts is always premised on one or more of the learning theories discussed in *section 3.3: Individual and Organisational Learning: Context and Theories*. This is because the strategy process draws on the perceptions, values, cognitive structures, experience, critical reflection, and knowing of the individual and collective for the formation of strategy in a particular context. The uniqueness of each individual as an actor in the strategy formation process explains why there are many perspectives but no consensus on how learning takes place in

organisations, a view shared with Rogers (2002) who believes that learning is a *"many faceted activity which incorporates a number of different processes ... instead of trying to establish one learning theory which covers all situations, perhaps we should be looking for more than one."*

Certainly both the 'traditional schools' of strategic thought, the *"prescriptive schools"* of strategy described by Mintzberg, Ahlstrand and Lampel (1998) and the strategic choice theory of Stacey (2000 and 2003), and the firm based theories described in *section 3.7: Firm Based Views of Strategy* draw heavily on cognitive theory for learning that informs the process of strategy formation. And, although constructivism can be considered key to the sound development of scenarios (Chermack and van der Merwe, 2003), scenario planning also draws on situated learning, critical reflection on experience and the knowledge based theories of learning.

4.3 The Process of Strategy Formation

For many academics and business people the process of strategy formation and the resultant strategy content reflects the explicitly stated or implied purpose and intent of the organisation. This statement goes to the heart of the reason for most organisations' existence and needs to be explored with the objective of establishing what drives strategic behaviour and the strategy formation process. As a starting point we can turn to the writings of Bartlett and Ghoshal (1994) who describe the context in which the concepts of organisational purpose and strategic intent emerged.

In the 1920's Alfred Sloan pioneered the strategy of diversification and in the process discovered that diversification produced better results when there was a specifically defined divisional structure with carefully designed planning and control systems that supported the structure. Bartlett and Ghoshal (1994: p79) note that from then on "*the strategy-structure-systems link has been an article of faith reflected in the design of MBA programs, reinforced in consultants' reports, and confirmed in the actions and mind-sets of practicing managers*". Many of these ideas were codified in Taylor's (1947) principles of 'scientific management'.

This approach made sense in the stable, high growth environment that characterised the post World War II years where the strategy-structure-systems framework provided the required discipline, focus and control. However, in today's complex, high velocity and intense business environments the strategy-structure-systems framework suffers from a "*fatal flaw*" according to Bartlett and Ghoshal (1994: p80), and this flaw lies in the objective of the framework that seeks to create a system of management that minimises the idiosyncrasies, the different rationalities and the uniqueness of human cognition and behaviour.

The concept of strategic intent was formalised by Hamel and Prahalad (1989) who saw the need for a new model of strategy that explained the success of organisations in complex business environments. This model was based on the belief that from 1970 to 1990 companies that had risen to positions of global leadership invariably began with ambitions that were out of all proportion to their resources and capabilities. This ambition translated into "*an obsession with winning at all levels of the organisation*" and this obsession was called "*strategic intent*" by Hamel and Prahalad (1989: p64).

In essence, Hamel and Prahalad are talking about a clear and articulated purpose that has specific objectives and criteria for the organisation to chart its progress. In addition, the achievement of this purpose is facilitated by resources that are leveraged and dynamic capabilities that allow the organisation to continually adapt to environmental conditions and achieve the organisations objectives.

However, Bartlett and Ghoshal (1994: p81) are not entirely convinced by the argument Hamel and Prahalad (1989) present, stating that a "*currently fashionable*" means to embedding corporate ambition "*calls for building a Zen-like focus on strategic intent to challenge and eventually overcome less focused rivals*". To do this management will identify a stretch target, generally defined in competitive terms, and will drive the organisation towards the target through a series of operating challenges. The danger of this approach for Bartlett and Ghoshal is strategic myopia and inflexibility.

Bartlett and Ghoshal (1994: p80) take a different view to Hamel and Prahalad on how companies achieve success in complex high velocity environments: leaders in these

environments "*place less emphasis on following a clear strategic plan than on building a rich engaging corporate purpose*". These leaders focus less on formal structure and more on effective management processes, and are "*less concerned with controlling employees' behaviour than with developing their capabilities and broadening their perspectives*". In effect, this means that the emphasis is more on the development of purpose, process and people and less on strategy, structure and systems.

The perspective of Bartlett and Ghoshal is premised on the belief that strategy can engender strong emotional attachments only when it is embedded in a broader organisational purpose. It is through these emotional attachments that individuals in the organisation form and implement appropriate and strategically aligned strategy that will result in the achievement of the organisational purpose. However, in most organisations this is not always the case. Individual self interest and organisational politics, as well as a number of the other factors described in *Figure 23: The Individual Cognitive Structures are Mediated by Organisational Structures*, will bias or skew the articulated organisational purpose and intent (Schwenk, 1988b).

In practice, the development of organisational purpose, the interpretation of this purpose and the emotional attachments of individuals to such purpose, are all dependent on the cognitive structures of the individuals in the organisation and the organisations' culture. This means that the organisational culture and individual cognition will establish purpose and objectives, and the mechanisms to achieve such purpose and objectives, in response to environmental and firm stimuli. The stimuli will pass through the 'lens of perception' (see *section 4.1.3: Environmental and Organisational Stimuli: Through the Lens of Perception*) and the individual will perceive an opportunity or threat that will be cognitively translated into purpose and intent. This purpose and intent can take the form of a vision of a market position, a competitive position, or an operational response to the stimuli around which strategy will be formed.

4.3.1 Clarification, Analysis and Synthesis: Understanding Context

Part of the process of developing purpose and intent is an explicit and / or intuitive series of activities that seeks understanding of the context out of which the stimulus

emerged. This process varies from individual to individual and is dependent on the cognitive structures of each individual. Furthermore, the context can be seen as an objective or subjective reality depending on the individuals' cognitive structures and the circumstances that characterise the context.

One of the biggest problems in strategic management is understanding and managing how individuals perceive their environment and how they interpret stimuli and information. Therefore it is necessary to understand the cognitive structures of the individuals and the organisation involved and the 'bounded rationality' that the individual applies in his or her perceptions, processing of information and formation of strategy (Schwenk, 1988b and Pitkethly, 2003).

Smircich and Stubbart (1985) provide a useful analysis of how the context may be viewed as objective, perceived or enacted. The objective environment consists of a reality that is 'out there' and capable of being described accurately and objectively. An example would be name and number of competitors and share of the market. The perceived environment occurs where the environment is subject to different interpretations which may or may not be correct. An example is where one competitor holds the view that his or her product is better or worse than another competitors' product. In the enacted environment there is no objective external environment, only the interpretations that people construct around their experience. An example of this environment is where an individual or organisation draws the boundaries of the organisations' market.

The emphasis in an enacted environment is on the interpretation individuals apply to what they perceive and the environments they themselves construct. According to Pitkethly (2003: p234) in "*such a view the idea that firms should adapt to their environment is potentially erroneous, since the firms themselves create the environments*". The individuals' act of considering the environment creates an original and distinctive environment and metaphor as much as a distinctive competence or strategy.

Against the background of objectivity, subjectivity and enactment, individuals and organisations draw on theories, frameworks and tools to help them make sense of and structure their experience of phenomena which yield stimuli and information. These phenomena manifest in the environment and within the firm, and the prescriptive environmental and firm based perspectives of strategy were developed to clarify, make sense of and structure stimuli, information, and the individual and organisational response.

The environmental and firm based strategy perspectives establish paradigms and a framework for interpretation that builds a common language and shared understanding in organisations of phenomena in the environment and the firm. This reduces the effect of different individual cognitive structures and rationalities and facilitates the synthesis and analysis of stimuli and information in a way that ensures a greater common understanding of firm purpose, the opportunities and threats facing the firm and the nature of the firms' strategic response to stimuli.

As such, this defines the role of existing strategy perspectives, outlined in *section 3.9: A Synthesis of Perspectives: The Structure of the Environmental and Firm Based Views of Strategy*, and suggests that the existing strategy perspectives inform and shape cognitive maps and cognitive activities at both individual and organisational levels. Since sensing and interpreting stimuli to attach meaning are cognitive activities, and the selection of theories, frameworks and tools for synthesis and analysis of the phenomenon that gave rise to the stimulus is also a cognitive activity, it is reasonable to suggest that the core process of strategy formation is a cognitive process.

4.3.2 Conceptualisation, Formation and Assessment of Alternatives and Options

Once stimuli arising out of phenomena in the environment and the firm have passed through the 'lens of pereeption' a number of sometimes simultaneous and sometimes linear processes are activated. First there is a process of sensemaking and attaching meaning to the stimuli and phenomena, which process may occur in parallel and/or serially with a process of synthesis and analysis that draws on, *inter alia*, existing strategy perspectives. In parallel and/or serially this is accompanied and/or followed by

the conceptualisation, formation and assessment of strategic alternatives and options. Throughout this full cycle of processes, and in parallel with these processes, there is a process of learning and knowledge codification taking place.

Again the cognitive structures that exist at individual and organisational levels give rise to the conceptualisation and formation of strategic alternatives and options and the assessment of these alternatives and options once they have been formed. To do this, the process associated with the conceptualisation and formation of strategic alternatives will be informed by the sense that is made of the stimulus that initiated the strategy formation process, the meaning that is attached to the phenomenon and the resultant stimulus, and the synthesis and analysis that is associated with the existing environmental and firm based perspectives and theories of strategy formation.

A process of 'socialisation' generally takes place at all stages of strategy formation in organisations. Such socialisation is guided by the characteristics of the organisations structures and culture as described in *Figure 23: The Individual Cognitive Structures are Mediated by Organisational Structures*. An example of this process is where an individual identifies an alternative application for a product the firm manufactures and sells. The individual will probably speak to the marketing, research and development and manufacturing departments to test this idea. At this point the individual has perceived through the 'lens of perception' an opportunity which he or she is now exploring within the organisation. This sparks other conversations in the organisation and some individuals will move to processes of analysis and synthesis and provide feedback on their findings to appropriate actors in the process. The strategy formation process is now gathering momentum as synthesis, analysis and strategic conversations increase to the point where a number of strategic options have been identified and it is time for a decision to be made. At the point of decision strategy has been formed and is now ready for implementation.

At each point in this process mediating factors created by the organisational structures and culture will play a role, and the final decision will be a product of the two levels of cognition – the cognitive structures of the individual and the culture of the organisation. The biases introduced by individual cognitive abilities and cognitive maps, power

relationships, individual self interest, the sharing of information and knowledge, how individuals and organisations learn, how accommodations are made and consensus is formed and the rationality of individuals all have a part in shaping the strategic options that are identified and the decision that is taken. Again it must be emphasised that reaching the point of decision is a cognitive process that is informed by existing perspectives and theories of strategy formation.

4.3.3 Strategy as Decision Making: Responding to Context

The pursuit of Modernism in management theory created a situation where the study of decision making was seen to be of little consequence. The assumptions of objectivity, rationality and linearity in markets and firms meant that there were obvious decisions for every context and these decisions could be arrived at by objective and rational thought (Wilson, 2003). The strategy-structure-systems paradigm encapsulated in the 'scientific management' approach entrenched this view and research around decision making was, as a result, neglected.

However, the increasing contextual complexity that has characterized operating environments and firms since the 1970's made many Modernist perspectives redundant and Modernism in management theory came to be seen as only relevant in stable and predictable contexts. This triggered an increase in research into decision making and the cognitive processes that lead to decisions being taken. One study, undertaken by Wilson (2003), consistently showed that strategic decision making differed within and between organisations as well as between different countries regardless of the context, indicating that the decision making process was subjective. This has led to a number of studies on the effects of cognition in decision making many of which were reviewed in *section 3.4: Cognition and Decision Making*.

The process of strategy formation in organisations is iterative and never-ending (Mankins and Steele, 2006), and each iteration leads to a decision that addresses a stimulus arising from phenomena in the operating context. These stimuli can range from an organisational need to establish purpose or clarify purpose to creating strategy for achieving objectives and strategic responses to opportunities and threats in the

environment. Obviously in high velocity contexts opportunities and threats present themselves more often than in stable contexts. This is contrary to the perception in many organisations that they 'do' strategy once or twice a year and all other activity in the organisation is operational. Emergent strategy owes its existence to strategic decisions that are taken every day by various members of the organisation in their operational capacities. Quinn (1980b) called this phenomenon 'logical incrementalism' but a better term would be 'strategic incrementalism' (de Wit and Meyer, 2004). See also *section 3.7: Firm Based Views of Strategy.*

All activities, cognitive or otherwise, in the process of strategy formation have one objective: to ensure the collection of emotions, thoughts and ideas created by the original stimulus in the minds of individuals converge on a Point of Decision. The Point of Decision is the point at which a choice between the strategic options and alternatives available to the organisation is made. At this point the strategy formation process manifests in the organisation as a purpose, an objective or objectives, and a process consisting of an activity or activities that is/are necessary to achieve the purpose and objective/s. The decision can result in intended strategy being realised or unintended strategy emerging from the system or systems that are affected by the decision.

The act of taking the decision may change the system in which the decision is situated in unanticipated ways and with unforeseen consequences. Such changes may result in further decisions and actions being taken to achieve existing objectives or new objectives may be formed through a process of decision making as the actors in the system learn and evolve. As such, a decision may have intended consequences (planned strategy realised) or unintended consequences that require additional decisions to achieve organisational purpose and objectives (emergent strategy), but both results will come about as a result of the original decision.

4.4 An Inclusive and Integrating Model of Strategy Formation

In seeking the 'golden thread' that runs through the various fragmented and disparate perspectives and theories of strategy formation in organisations, it was necessary to develop a clear understanding of the premise of strategy, its nature and its

characteristics. The iterative literature review process (see *Chapter 2: The Research Design and Methodology*) followed by cycles of synthesis and analysis was very effective in building this understanding. During the course of this process it became apparent that there is compelling evidence supporting systems theory, cognitive theory, and learning and knowledge codification as the three main premises of strategy formation.

While existing perspectives and theories of strategy formation, especially the firm based theories, have integrated learning and knowledge codification into their perspective, few of the perspectives and theories incorporate or explicitly acknowledge the systemic nature of the environment and the firm and, *ipso facto*, the process of strategy formation. Furthermore, while there are now many narrow views of the impact of cognition on strategy formation (see *section 3.4: Cognition and Decision Making*) there is no coherent theory of strategy formation as a cognitive process.

Taking into consideration that the research, analysis and synthesis in this thesis has not found one perspective, theory or framework that disagrees with the fact that strategy formation is a process of thought, arising from a stimulus or stimuli, that leads to a response in the form of a decision, it is surprising that attention has not been focused on the process of perception, thought and decision in strategy theory. The idea that strategy formation is about perception, thought and decision making gets to the heart and nature of strategy, and the perception and thought elements can be formally described as a set of cognitive activities, based on cognitive maps (including worldviews and mental models) and cognitive abilities that can collectively be termed the cognitive structure.

Expanding on the nature of strategy formation, it has been noted in this research that strategy formation in organisations is socially constructed through culture and conversation, and the process and content of strategy formation is subject to the cognitive structures of the individual as well as the cognitive structures of the group. Furthermore, strategy formation is intangible and only has form in the mind of the individual until it manifests as a decision to take action. This has led to the observation that strategy can be seen as a pattern in a stream of decisions as well as a pattern in a stream of actions or activities. In this regard it must be noted that taking action is a

result of a decision between two choices: choosing to act (whatever form the action takes) or choosing not to act. Therefore a decision (conscious or unconscious) is always a precursor to activity.

In *section 4.1.3: Environmental and Organisational Stimuli: Through the Lens of Perception*, it was observed that phenomena (disturbances in the system) led to stimuli that triggered a response in the form of a process of strategy formation. If existing strategy perspectives and theories (as discussed in *section 3.6: Environmental Views of Strategy* and *section 3.7: Firm Based Views of Strategy*) are applied to the phenomenon that resulted in the stimulus, regardless of whether the stimulus originated in the firm or the environment, the process of strategy formation will be described in terms of outcomes. That is, the stimulus will be classified as a threat or an opportunity, a strength or a weakness, and objectives will be established in terms of this classification. For example: "we will exploit this opportunity" or "we will build competencies to mitigate this weakness". Following this a process of analysis using one or more of the strategy perspectives and theories will follow. Generally, this analysis will result in strategic options being identified and a choice will be made in the form of a decision. This situation is graphically depicted in *Figure 24: The Mechanism by which Context Drives Strategy Formation.*

There is a degree of 'path dependence' in this approach on the part of the academics and practitioners who contributed to the development of the existing perspectives and theories on strategy formation. This could, in part, be due to the philosophy of Modernism which structures much of the way people think and, in part, due to the way in which theory is built. Modernism seeks the objectively real, the tangible, and is rational and sequential in its method. A threat, an opportunity, an objective, a strategic option is real. It can be written down on a piece of paper and quantified and measured. This is the 'stuff' that gives comfort to those driven by a philosophy of Modernism. Within this paradigm new theory is built on existing theory and that which is generally accepted forms the basis for new theory development. This can be clearly seen in the economic, military, evolutionary, sociological, psychological and political roots of nearly all strategy formation theory.

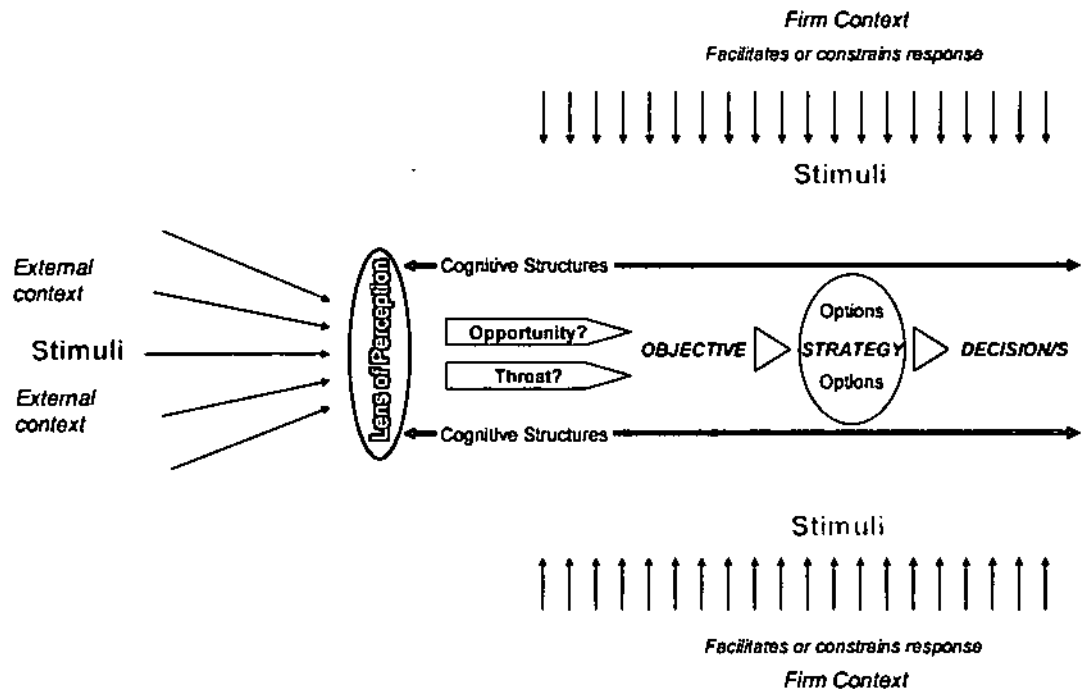


Figure 24: The Mechanism by which Context Drives Strategy Formation:

This approach points to a need to revisit the premises on which the perspectives and theories of strategy formation have been established using a different philosophy and new perspectives. The philosophy of subjective interpretivism has been applied throughout this thesis and has been used in identifying the main premises of systems theory, cognitive theory and learning and knowledge codification noted above. These premises are the foundation for building a model that integrates existing theory and provides a robust base on which new theory can be developed.

The research has noted that phenomena in the environmental and organisational systems lead to a stimulus that triggers a response in individuals in the organisation. These phenomena are therefore the cause of strategy formation, decision making and strategy implementation in the organisation. Established strategy perspectives and theories will categorise the phenomena and an objective, or a number of objectives, will be generated. Through a process of synthesis and analysis strategic options will be identified and a choice from these options will be made in the form of a decision. The categories, the objective, the options and the decision can be labelled outcomes.

This leads to one key question: What is the process that moves individuals and organisations from cause to outcome? The answer is: the core process of strategy formation.

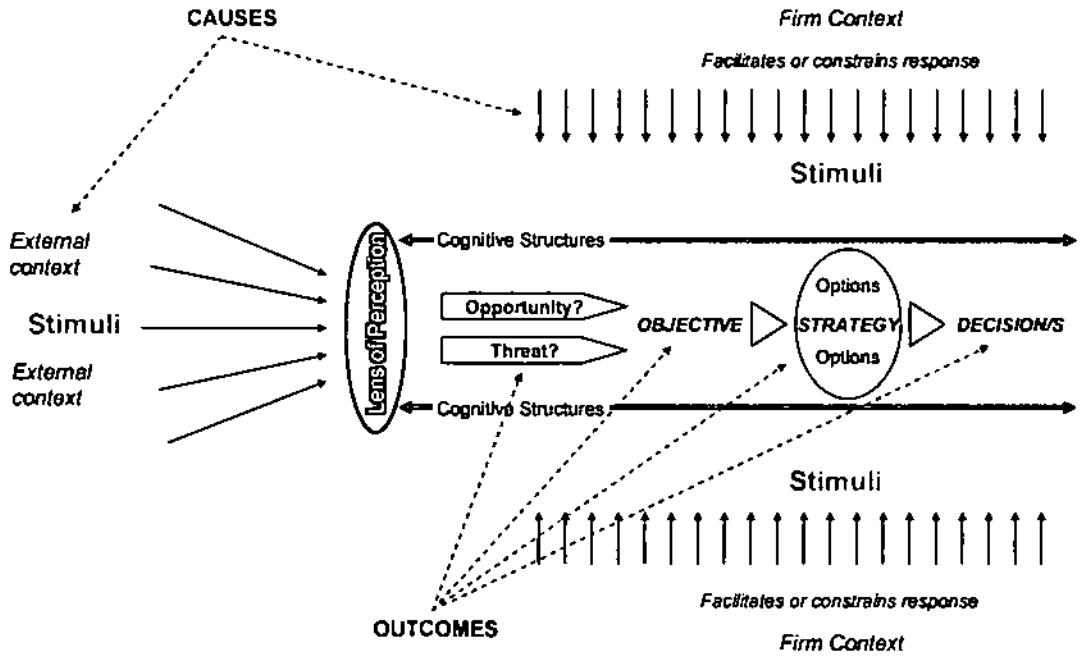


Figure 25: From Cause to Outcome – What is the Process?

From an organisational perspective, the primary system is the environment in which the organisation operates and the two main sub-systems in this environment are the market and the organisation (also referred to as the 'firm'). At this point it does not serve any purpose to distinguish between the environment and the market and both the primary system, being the environment, and the sub system, being the market, are treated as one system and called the environment for the argument being presented (see *Figure 19*: *Systems, Boundaries and the Impact of Strategy on the System*).

Systems are characterised by agents, entities and the interrelationships between these agents and entities. Embedded in the systems premise are conditions of stability, complexity and chaos depending on the perspective of the agent and the degree of activity (or disturbance) in the system. The agents, in acting and reacting within the boundaries of the system, create disturbances in the system that are picked up by the agents in the system and passed through the agents' cognitive structures. The agent is

then able to make sense of the disturbance and attach meaning to both the phenomenon that gave rise to the disturbance and the stimulus created by the disturbance.

The disturbance can be economic, such as changes in demand and / or supply or the pricing mechanism that regulates demand and supply, evolutionary when a firm develops capabilities that allow it to leverage into new products or markets or compete more effectively in existing markets, sociological where ethnicity will create a specific organisational culture that through its diversity may foster constant innovation, and psychological and political where it enters the realm of brand consciousness or fashions and fads. In each instance environmental and / or firm systems, which are interrelated, will be disturbed and this will send off a stimulus that will be picked up by firm and individual (cognitive) scanning mechanisms as stimuli.

Passing this stimulus through the 'lens of perception', making sense of the stimulus and the creation of meaning are the first steps in a cognitive process that will culminate in the selection of an appropriate response for the phenomenon that gave rise to the stimulus. This is the process of strategy formation and it takes place in the minds of each individual and the collective that is the organisation.

Of particular importance in this argument is that economic factors, evolutionary and organic factors, and sociological, psychological and political factors are all interrelated and are all manifestations in the environmental and organisational systems. Disturbances occur when the interrelationships between the agents and entities are changed and this leads to the stimuli that trigger the cognitive processes in the agents. In effect this means that the three elements of the prescriptive environmental schools and the five elements of the descriptive firm based perspectives of strategy formation, in their narrow perspectives of the strategy formation process, simply inform the core cognitive process as to what should take place (the prescriptive views) and what is taking place (the descriptive views).

The integrated models of the environmental and firm based views (see *section 3.9: A Synthesis of Perspectives: The Structure of the Environmental and Firm Based Views of Strategy*) are therefore extremely useful in that these views structure and inform the

individual and collective understanding of the environmental and organisational systems under scrutiny. In addition, the structure and information obtained from processes of analysis and synthesis within the two views provides guidance for the cognitive process of strategy formation and decision making.

Figure 26: The Core Process for Strategy Formation illustrates the argument presented for the individual and collective cognitive processes being the core process of strategy formation. Being a cognitive process the order of the sub-processes is random and dependent on the individual and the organisations' cognitive structure, and sub-processes and activities are often simultaneous and often sequential. It is also extremely important to note that a process of learning and knowledge codification takes place continually throughout the cognitive process of strategy formation.

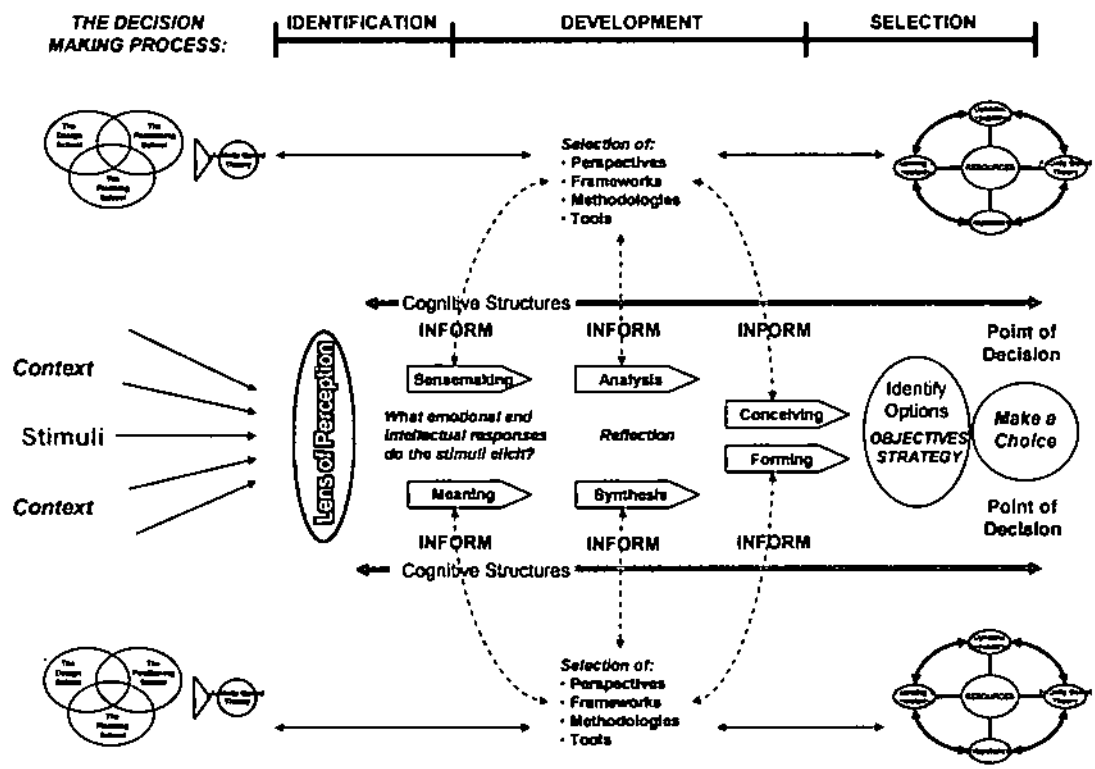


Figure 26: The Core Process for Strategy Formation

The argument leading to the model depicting the core process of strategy formation (*Figure 26: The Core Process for Strategy Formation*) has been constructed as follows:

- For information on the integrated models of the environmental and firm based perspectives of strategy formation refer to *section 3.9: A Synthesis of Perspectives: The Structure of the Environmental and Firm Based Views of Strategy*;
- *Section 4.1: The Influence of Context on Strategy Formatian: A Systems Perspective* covers the concepts of systems, contextual drivers in the environment and the organisation, and organisational purpose. These concepts are extended to the creation of stimuli arising out of disturbances in the systems that are the environment and the organisation and are recorded in *section 4.1.3: Environmental and Organisational Stimuli: Through the Lens of Perception.*
- Making sense of phenomena and the creation of meaning is covered in *section 4.2.2: Culture and Worldview: Making Sense of Phenamena and Creating Meaning.*
- The understanding of the contextual drivers of the strategy formation process is dealt with in *section 4.3.1: Clarification, Analysis and Synthesis: Understanding Context.*
- Refer to *section 4.3.2: Conceptualisation, Formation and Assessment of Alternatives and Options* for an explanation of this sub-process.
- For information on the decision making process, refer to *section 3.4: Cognition and Decision Making* and *Figure 6: Normative and Descriptive Models of Decision Making*, and *sections 3.4.3: Decision Making: Normative and Descriptive Models and 4.3.3: Strategy as Decision making: Responding to Context.*

In concluding *Chapter 4: Towards an Integrated View of Strategy Formation in Organisations*, two aspects of the proposition that the environment and organisation are systems in which the cognitive process is the core process of strategy formation need further comment:

1. Current perspectives and theories of strategy formation, other than the developing fragmented and narrow perspectives of cognitive theory, do not offer a comprehensive explanation of why strategy is unique to each organisation.
2. Current environmental and firm based perspectives of strategy formation lie outside the core process of strategy formation.

The answer to the first question depends on the worldview that is applied to the phenomenon and its context. For those firmly rooted in the Modernist tradition it may appear obvious that the organisations context, competencies and dynamic capabilities

and different ways of learning and codifying knowledge lead to differences in strategy. After all, truth is objective and the constructs leading to the differences in strategy are objectively real – they have been observed, structured as an empirically proven theory, and codified as knowledge.

However, if a Subjective Interpretivist perspective is adopted it can be argued that the organisations context is individually and socially constructed, and competencies, dynamic capabilities and the learning and knowledge profile are the product of individual and organisational cognitive structures. In this view the truth is subjective and all knowledge is relative to the knower which means that knowledge can only be understood from the point of view of the individuals who are directly involved in the creation of such knowledge. As such, differences in strategy exist because individual cognitive structures lead to different interpretations of, and responses to, phenomena and context.

If it is accepted that strategy formation is a result of the individual and group cognitive structures in an organisation the perspective of strategy formation moves from an objectively rational and linear perspective, rooted in Modernist thinking, to a subjectively rational systemic perspective, rooted in Subjective Interpretivist thinking. This shift in thinking leads to an intuitively robust explanation for the phenomenon of organisationally unique strategy. In addition, this explanation acknowledges the complexity that characterises the environment in which organisations exist, and will lead to the formation of strategy that has greater relevance in such environments.

This also means that the Subjective Interpretivist view leads to individual and organisational cognition being perceived as core to the strategy formation process and, *ipso facto*, existing mainstream theory and perspectives on strategy formation will lie outside the core process.

Chapter 5: CONCLUSIONS, PERSONAL PERSPECTIVES AND FUTURE RESEARCH

Following the preliminary literature review and the development of the research proposal for this thesis, two research objectives and five research questions were identified. It was intended that the first research objective, to document a wide ranging and deep study of theory on strategy formation, provide a foundation for the second research objective. The second research objective was to develop an integrated theory of strategy formation that would address the current state of fragmentation and theoretical pluralism in the strategy discipline. The five research questions were designed to establish a robust structure that would deliver on the second objective.

The research therefore set out to conduct and document a detailed study of the various perspectives on strategy formation in organisations with specific reference to the context in which strategy formation is enacted, the process or processes that govern strategy formation and the content that manifests as a result of the context and processes. This study was completed and has been documented in *Chapter 3: The Literature Review* and part of *Chapter 4: Towards and Integrated View of Strategy Formation in Organisations*. During the course of the study the five questions, each a step in the journey to the creation of an integrated theory of strategy formation, were answered.

The first question 'can most significant perspectives, theories and methods of strategy formation be broadly categorised into an external (rationalist or environmental) and internal perspective (the firm based view)?' was answered in the affirmative in *section 3.5.3: A Divergence in Emphasis: 2 Views of Strategy*. Following a detailed analysis of these two views in *section 3.6: Environmental Views of Strategy* and *section 3.7: Firm based Views of Strategy*, the two views were synthesized and clear structures for each of the two views emerged. These structures, which helped identify aspects and elements common to both structures, are documented in *section 3.9: A Synthesis of Perspectives: The Structure of the Environmental and Firm based Views of Strategy*.

The second question built on the first question in that theory on context, both internal and external to the organisation, was reviewed, analysed and synthesized to understand

how it influences the choice and use of the environmental and firm based perspectives of strategy formation. Each of the two perspectives, and each of the theories that make up the two perspectives, will result in the application of different processes and the development of different content during strategy formation. This was addressed in *section 4.1: The Influence of Context on Strategy Formation: A Systems Perspective* where it was found that the nature and characteristics of the environment and firm contexts, which can be described as systems and sub-systems of varying degrees of stability/complexity, drives the organisational response and the selection of perspectives and theories.

The third question, closely related to the second question, helped to identify the mechanism by which context drives strategy and provided insight into the core process of strategy formation. This mechanism was described in *section 4.1.3: Environmental and Organisational Stimuli: Through the Lens of Perception*, *section 4.2: The Primacy of Individual Cognition and Organisational Posture*, and *section 4.3: The Process of Strategy Formation*. In effect, the mechanism driving strategy formation starts with stimuli generated by phenomena in the environmental and organisational context, and proceeds with a cognitive process in the minds of the individual and the collective which ultimately leads to a response to the stimuli in the form of a strategic decision.

The fourth question is critical to this thesis in that it helped identify the elements of strategy formation that are core to both the prescriptive environmental and descriptive firm based perspectives. This provided the foundation, in the form of a core process, on which to meet the second objective of the thesis. Essentially, the relationship between the rationalist or environmental theories and the firm based perspectives of strategy formation has three components: all strategy theories are systemic in nature, all individuals and organisations make sense of the system and create meaning from its characteristics through a process of cognition, and the process of cognition as applied to the system or systems under scrutiny will always lead to individual and organisational learning and knowledge codification.

The fifth question and the second objective are similar in nature and content. If the answers to the first four questions provide an academic and empirical foundation for the

development of an inclusive and integrating theory of strategy formation, then it is possible to determine the form an inclusive and integrating theory of strategy formation will take, and it is possible to develop an integrated theory or model of strategy formation that will address the current state of fragmentation and theoretical pluralism in the strategy discipline. This is addressed in *section 5.1: An Integrated Theory of Strategy Formation.*

5.1 The Integrated Model of Strategy Formation

As discussed in *Chapter 1: Orientation*, the strategy discipline is highly fragmented and there are many perspectives and theories of strategy formation. This is evident in the writings of Barca (2003), Elfring & Volberda (2001) and Foss (1996) who all noted that strategy theory demonstrates a state of disciplinary fragmentation, a view referred to by Bowman, Singh & Thomas (2002) as theoretical pluralism, and by Pettigrew, Thomas & Whittington (2002) as a multidisciplinary melting pot.

Henry Mintzberg, individually and jointly, in various writings spanning more than 30 years has presented strategy as plan, ploy, pattern, position and perspective (5 P's for Strategy: Mintzberg, 1987), as emergent and deliberate (Mintzberg and Waters, 1985), and as 10 schools that make an elephant (3 prescriptive, 6 descriptive and 1 as configuration: Mintzberg *et al*, 1998). Mintzberg's writings can be contrasted with de Wit and Meyer (1994, 1998 and 2004) who, in 1994 classified strategy into 2 categories, a resource based approach and a positioning approach, and then went on to present strategy as a series of 11 paradoxes in 1998 and 2004, and Whittington (1993) who identifies 4 categories of strategy (classical, evolutionary, process of learning & compromise, social systemic) along 2 dimensions (outcome & process). Chaffee (1985) added to the confusion with his contention that there are 3 models of strategy: linear, adaptive and interpretive.

If this is not enough, there is Andrew's (1965 and 1971) SWOT Analysis, the Boston Consulting Group's Growth Share Matrices, McKinsey's 7S Model, Porter's (1980 and 1985) Value Chains, Industry and Competitor Analysis, and Generic Strategies, Hamel and Prahalad's (1989, 1990 and 1994) Core Competencies, Strategic Intent, and Strategy

as Stretch and Leverage, Quinn's (1980b) Logical Incrementalism, Teece, Pisano and Shuen's (1997) Dynamic Capabilities, Penrose (1959), Wernerfeldt (1984) and Barney's (2001) Resource Based and Evolutionary Theories. And the lists go on ....

Obviously this situation pointed to a need, recognised by Barca (2003), Elfring & Volberda (2001), Foss (1996), Bowman, Singh & Thomas (2002), Pettigrew, Thomas & Whittington (2002) and Schoemaker (2001), for some integration of theories to take place. While there have been a number of efforts directed at developing such an integrated perspective of strategy theory, most of these efforts have resulted in the development of discrete structures for either the prescriptive environmental perspectives or the firm based perspectives of strategy formation. And many of these have been presented as integrated theories of strategy. In addition there have been a few attempts at developing both a multi-perspective and integrated view of strategy formation that covers both the environmental and firm based streams of strategy formation. These integration efforts are presented in *section 5.1.1: The State of Integration in Strategy Theory.*

5.1.1 The State of Integration in Strategy Theory

Perhaps the most common approach to integrating strategy theory occurs in practice and involves using and combining different perspectives of strategy to address a specific organisational need. This approach is a transient and incomplete form of integration because in practice strategy formation is driven by contexts that, in complex environments, are in a state of constant change. Ambrosini and Jenkins (2002: p264) have termed this form of integration a "*multi-perspective*" approach. According to Ambrosini and Jenkins, using multiple perspectives provides focus on certain aspects of strategy including context. However, "*none of them*" (the aspects) "*captures the entirety of the strategy field*" but "*all contribute to our understanding of the field*".

One of the better examples of the multi-perspective approach is Shay and Rothaermel's (1999) use of four perspectives for developing a multi-perspective conceptual framework. This framework drew on D'Aveni's (1994) Hypercompetition Model, the Boston Consulting Group's Growth Share Matrix, Ohmae's (1982) Four Routes to

Competitive Advantage and Hamel and Prahalad's (1994) Core Competency Agenda Matrix. While Shay and Rothaermel (1999: p561) "*acknowledge the presence of many additional strategic analysis models*", their approach was not to create integrated strategy theory but to develop and foster understanding of the interconnectedness of approaches to strategic analysis.

A more comprehensive multi-perspective approach, built on the idea of using the interconnectedness of existing perspectives, was developed by Ghemawat (2001) who, together with Collis, Pisano and Rivkin, configured multiple perspectives into an end-to-end strategy process that encompasses both environment and firm based views. Ghemawat pieces together disparate theories, frameworks and tools into a coherent whole that provides a clear picture of the environment and, using the delivery of value to the market (the Value Chain: Porter, 1985) as the linking mechanism, creates a dynamic firm based view of the organisation as the mechanism for delivering the value.

In the case of Shay and Rothaermel (1999: pp561-562), they did not seek to create integrated theory but rather to assist practitioners and fuel scholarly debate around the interconnectedness of approaches in the field of strategy. Ghemawat (2001), on the other hand, was looking to tie together the various and disparate perspectives of strategy into a comprehensible and cohesive whole that would facilitate a better understanding of the field of strategy. In both Shay and Rothaermel's case and Ghemawat's case, neither sought to create new theory but both sought to make sense of existing theory.

However, in Ghemawat's case, Ghemawat and Pisano succeeded in providing some structure for the firm based views of strategy with their resource endowment / resource commitment / activities view of the firm. This view reflects Ghemawat's (2001) roots in Modernist philosophy and draws heavily on economics as a basis for structuring the resource based views. As such, little attention is paid to learning and knowledge codification as cognitive activities, and these activities are not seen as essential for the development of dynamic capabilities in the firm.

In practice, organisations and consultants frequently mix and match strategy perspectives to provide an understanding of specific situations and to help guide the

development of content and justify the content once a decision has been taken to implement a strategy. However useful multiple perspectives may be in practice, there are three critical shortcoming associated with the approach from a theoretical point of view:

- it is only as strong or weak as the perspectives, and the interconnectedness of the perspectives, that make up the multi perspective framework,
- it tends to be useful only in specific contexts and situations, and
- it is not particularly useful for the creation and development of theory. Using multiple perspectives in the fashion described above does not lead to the development of descriptive or normative models that can explain and predict how strategy is formed by individuals and organisations.

From a theoretical perspective, the strengths and weaknesses of each of the perspectives, and the narrowness of each of the perspectives, making up the multi-perspective frameworks have been dealt with in *section 3.6: Environmental Views of Strategy* and *section 3.7: Firm Based Views of Strategy*. Working from the premise of narrow perspectives that hold both promise and problems, we need to consider whether or not the multi-perspective frameworks hold any potential for developing an integrated theory of strategy formation.

If we look at the multi-perspective approach from an empirical rather than a theoretical perspective it can be seen that the approach is useful where a context in which it is to be applied can be clearly defined. This facilitates the selection and application of appropriate theories, frameworks and tools for specific situations, but the approach does not explain *how* strategy will be formed for the context in which it is to manifest. This approach is therefore limited to helping strategists to understand and explain some of the constructs under examination and provide some guidance about strategising.

From a theoretical point of view, the narrow and analytic focus of the many and fragmented perspectives of strategy formation on phenomena within the field of strategy formation, rather than a broad and synthetic focus on the phenomenon of strategy formation itself, indicate that it is unlikely an integrated theory will develop from a multiple perspective approach. Furthermore, focus differences, process differences and

outcome or content differences between many of the theories makes a comprehensive integration of the various theories both cumbersome and difficult. This is of particular importance when one considers that the accepted and validated theories making up the strategy discipline are many and diverse, and the omission of any one of these theories would result in an integrated theory of strategy that is less than complete.

Having noted the issues associated with developing an integrated theory of strategy formation using a multiple perspective approach, it is worthwhile looking at some of the attempts at integrating strategy theory using other approaches. Many of these attempts have focused on a process of categorisation based on common characteristics as a basis for understanding each of the theories and frameworks and how the theories and frameworks are connected. As documented above in *section 3.6: Environmental Views of Strategy* and *section 3.7: Firm Based Views of Strategy*, this has resulted in primary classifications of theory such as environmental and firm based views or prescriptive and descriptive views of strategy.

Within each of these primary classifications further categorisation takes place such as in cognitive theory and learning theory where much of the research and theory development has been very specific and narrow in its application. For example, in *section 3.3: Individual and Organisational Learning: Context* and *Theories and section 3.4: Cognition and Decision Making* it can be clearly seen that a number of perspectives exist and collectively these perspectives are classified as cognitive theory or learning theory.

This classification and categorisation has provided a basis for the few meaningful attempts at the integration of strategy theory that have taken place. Of particular interest, as far as these 'meaningful attempts' is concerned, is that an extensive literature review produced only a few superficial multi-perspective integration efforts for the prescriptive environmental approaches, and these efforts focused more on the analysis and understanding of particular contexts than on building theory that explains how strategy formation takes place. The few theoretically defensible strategy integration efforts found in the literature, that have focused on explaining how strategy formation takes place, have been rooted in the descriptive firm based theories of strategy.

In this regard, Sanchez (2001: pp143-144) has noted that the boundary school, which is premised on how decisions and actions of organisations affect the boundaries of the organisation, its markets and its environment, offers some "*potential for synthesis of strategy theory by simultaneously considering multiple approaches that offer insights into strategic decisions affecting the boundaries of organisations*". Furthermore, according to Sanchez, the configuration school of Mintzberg *et al* (1998) draws on the other nine strategy schools of thought articulated by Mintzberg *et al* to understand the "*episodic and situational fit of alternative strategies in various environmental contexts*".

For Sanchez (2001: p144), the boundary school reflects the character of strategy as an issue based field whereas the configuration school reflects the strategy fields' eclecticism. This led Sanchez to propose the dynamic capabilities school as a definitive "*synthesizing perspective*" consisting of resources, competencies and dynamic capabilities. Each element of Sanchez' dynamic capabilities can be seen as a "*progression of concepts*" and each "*significantly extends the ability of this evolving perspective to achieve integration of diverse approaches to strategy theory*". See *sections 3.3: Individual and Organisational Learning: Contexts and Theories, 3.7.1: The Resource Based View of Strategy,* and *3.7.2: Core Competencies, Dynamic Capabilities and Organisational Learning* for an overview of the three concepts that make up Sanchez' dynamic capabilities school.

The nine schools and the configuration school of strategy that make an 'elephant', identified and articulated by Mintzberg (1990) and Mintzberg *et al* (1998), requires further discussion because it is one of the few theoretically constructed and reasonably robust attempts at integrating the field of strategy. Mintzberg *et al* (1998) categorise the ten schools into three prescriptive schools which correspond with the environmental schools, six descriptive schools which correspond with the firm based schools, and a configuration school that focuses on change and transformation.

Mintzberg *et al* (1998) then suggest that each school can be seen as a process in itself or as part of a single process that is called an elephant – metaphorically speaking. It is at

this point that the theory of strategy integration that Mintzberg *et al* (1998: p368-370) propose becomes inconsistent.

The argument that is presented is premised on the view that the ten schools have come into existence because practitioners and academics "*chop up reality for their convenience, in some cases using one part of the beast while ignoring the rest*". But, Mintzberg *et al* assert, managers in organisations have "*to deal with the entire beast of strategy formation*" not only its parts, and they then proceed to map the ten schools in two dimensions: how controllable the external environment seems to be (from comprehensible and controllable to confusing and unpredictable), and how open ended the internal process is (from rational to natural). This map seems to suggest that certain schools are more suited to specific contexts than others and the processes associated with addressing these contexts are discrete, a contention that is borne out by the research conducted for this thesis.

However, Mintzberg *et al* (1998) do not address this inconsistency, nor do they address other dimensions, themes or common constructs associated with and linking the ten schools before moving to a conclusion that there is a single end-to-end process of strategy formation that incorporates all ten schools. Regardless of this gap in the logic of the argument that Mintzberg *et al* (1998: pp370-373) present in describing the end-to-end process, they still make some interesting and pertinent points:

1. "*At the center*" of the process that is strategy formation "*is the actual creation of strategy, shown as a black box, to indicate how it is in fact treated by most of the schools.*" This 'black box' is called the cognitive school and only "*the cognitive school really tries to get inside, but ... without much success. The learning and power schools make tentative efforts in this regard.*" All of the nine other schools "*take their place*" in the process "*around this black box*".
2. "*We can conclude that our ten schools look at the same process every which way. Together, we hope, they can help managers see through all of this*" to the heart of what is really strategy formation.

3. "*We need to be more comprehensive – to concern ourselves with process and content, statics and dynamics, constraint and inspiration, the cognitive and the collective, the planned and the learned, the economic and the political*".

Perhaps the most important point that Mintzberg *et al* make is that strategists, be they academics or practitioners, have to get beyond the narrowness of each school and get to "*know how this beast called strategy formation, which combines all of these schools and more, really lives its life*". This comment lies at the heart of this thesis and precipitated the search for an inclusive and integrated theory of strategy formation (see *section 4.4: An Inclusive and Integrating Model of Strategy Formation*) that has both explanatory and predictive ability. *Section 5.1.2: The Contribution to Theory* looks at the importance of this ability.

5.1.2 The Contribution to Theory

According to Morse (2004: p1387) "*the goal of most qualitative inquiry is the development of theory*". However, the "*actual process of theory construction has been overlooked*". A "*great deal of effort is spent explicating processes of coding and developing categories and themes, but the transformation of these categories into concepts, determining the position of concepts in the emerging theory, and the actual structure of the theory have been poorly described*".

Against this background, this thesis has contributed to the development of theory in four areas:

1. **The methodology that was developed specifically for this thesis.**

   Morse (2004 pp:1387-1388) states that qualitative theory, in all but grounded theory, "*has been concerned with descriptive and explanatory theory but has not developed formal or prescribed processes that dictate the structure of the theory. With the recent interest in multiple-method research*" that increases "*the scope, depth, complexity, and significance of qualitatively derived theory*" the "*role of concepts*

requires serious reconsideration – perhaps even a research method in its own right".

The research was conducted using a new and unique double loop learning process that drew on two research designs and methods, articulated by Mouton (2001) as a Critical Literature Review and a Theory Building Study, and explored, described, analysed and synthesized existing literature to build an integrated theory of strategy formation. Existing concepts of strategy formation were described and scrutinised and new concepts of strategy formation were built, and these concepts provided the foundation for the development of integrated strategy formation theory.

According to Morse (2004), the understanding of existing concepts and the development of new concepts is critically important because it facilitates and enables:

- The recognition of patterns. The identification of a concepts attributes provides a means whereby similar instances, behaviours and occurrences in data can be recognised.
- Comparison or recognition of variation. Recognising things that are similar helps an observer to see things that are different. As importantly, knowing why there is a difference assists in the formation of new concepts.
- Recognition of new instances. Understanding the characteristics of a concept provides actors with the ability to anticipate new occurrences of the same concept in other contexts (a predictive ability).
- The ability to extend concepts beyond the immediate context (an explanatory ability).
- The application of the concept to similar problems in different contexts.

This builds the explanatory and predictive capacity (referred to in *section 5.1.1: The State of Integration in Strategy Theory*) of the findings in the research thereby adding to the body of knowledge of strategy formation theory.

Apart from the contribution the unique and new research design and method makes to research theory, the process described above and outlined in *Figure 2: The*

Research Design and *Figure 3: The Research Methodology* has proved to be robust and very effective in developing concepts and building theory.

2. **The development of an inclusive and coherent structure for existing theory on strategy formation.**

   The extensive and iterative literature review of strategy theory surfaced a considerable amount of data that was subjected to a process of categorisation and the identification of themes. This resulted in the development of two structures that describe existing fragmented theory and the concepts of the environmental view that drives and shapes strategy in organisations, and the firm based view that develops and delivers strategy. The concepts were defined and the attributes of the concepts were noted as a foundation for a synthesis of the data.

   Three common themes (seen as patterns in the strategy theory) were extracted from the two structures: systems theory, cognitive theory and learning and knowledge codification. The new structures, concepts and themes were compared to existing structures, concepts and themes and it was observed that while there are differences in the structures and concepts, the themes are common to both the new and the established. The differences that have been noted build additional theory on existing theory and also add an overall coherence to strategy. As a result, the explanatory and predictive potential of both the environmental and firm based views of strategy formation have been enhanced.

3. **The integration of the fragmented body of theory on strategy formation and the elimination of the theoretical pluralism that characterises strategy theory.**

   What is clear from the introduction to *Chapter 1: Orientation* and *section 1.1: The Problem Statement* is that two of the prevailing characteristics of existing strategy theory are fragmentation and theoretical pluralism. Furthermore, this fragmentation and theoretical pluralism has led to many prominent academics and practitioners agreeing that there is a clear need for the integration of theory on strategy and acknowledging that presently such a theory of integration does not exist.

The thesis therefore set out to develop an inclusive and integrated theory of strategy formation based on an intensive and extensive review of strategy theory and any other theory that has an influence on strategy formation. This process surfaced, *inter alia*, systems theory (stable, complex and chaotic systems), cognitive theory, decision theory and learning and knowledge codification theory as being critical to strategy formation.

The process of developing integrated theory had to include making sense of and attaching meaning to existing theory and, off this base, creating new concepts that could be applied to the development of integrated strategy theory. The integration theories that currently exist were deliberately ignored until the categorisation of data was complete, integrated structures were developed for the prescriptive environmental and descriptive firm based views of strategy, and the integrated theory of strategy formation was developed.

This approach was adopted to ensure that new concepts of integration theory were not influenced by the existing concepts. While this was not always possible, especially with structures and integration theory developed for the firm based views of strategy, it was possible to develop an integrated theory for the prescriptive environmental views and the inclusive integrated theory of strategy formation without influence from existing theory. This was assisted by the paucity of existing theory in these two areas, a subject covered in *section 5.1.1: The State of Integration in Strategy Theory.*

As such, the integrated theory of strategy formation described in *section 4.4: An Inclusive and Integrating Model of Strategy Formation*, is new theory built on the validated strategy theory, structures, concepts and themes identified and developed in *Chapters 3 and 4* of the thesis. However, the aspect of the new theory that is critically important is that the integrated theory developed in this thesis explains *how* strategy is formed in *all* contexts. This moves strategy from a collection of discrete and narrow theories and perspectives of strategy that are usually only applicable in specific contexts, to an integrated theory that is generally applicable in any context.

In addition, the model provides actors with the predictive ability to anticipate new occurrences of the same concept in other contexts.

4. **A redefined and critical role for scenario thinking in the cognitive process that is the core process of strategy formation.**

   An unanticipated and extremely useful perspective of scenario thinking and planning also emerged from the process that led to the development of the integrated theory of strategy formation. Working from the premise that the cognitive process is core to all strategy formation, the appropriate application of a scenario planning process (in effect a scenario thinking process) will provide an integrative mechanism for strategy formation. *This concept is documented in section 5.2: Scenarios as an Integrating Mechanism.*

5.2 Scenarios as an Integrating Mechanism

Scenario planning has been around for centuries and has been used very effectively in politics and in military applications but it has not been well received in the business environment. This is probably because it has lacked structure in its application, and requires considerable skill to facilitate and embed as an ongoing process in organisations. It also appears as though there is a lack of understanding of what scenario planning is, what it does for an organisation, and how it can be applied. Perhaps the most unfortunate perspective is that it is seen, in some of the popular business and financial literature, as another management fad that has already run its course.

For those steeped in the Modernist philosophy and applying rationalist and linear mental models, the ambiguity and sometimes intangible results of the scenario planning process can lead to a form of individual and organisational cognitive dissonance that results in a rejection of the scenario planning process. The introduction of a scenario planning process in organisations dominated by rational structures, standardised procedures and routine practices would therefore require a shift in the mental models of the organisation before a scenario planning process could be successfully introduced.

Having documented some of the issues associated with the introduction of scenario planning into organisations, it should be noted that it is probably the most effective tool in the strategists' arsenal for managing in complex and uncertain environments. A particularly interesting observation in this regard, is that the current focus on the prescriptive and descriptive frameworks and tools in organisations' strategy formation efforts, and the lack of strategy integration theory that situates systems thinking, cognition, and organisational learning and knowledge codification at the centre of the strategy formation process, has led to scenarios been categorised as a planning tool rather than as a thinking tool.

5.2.1 Scenario Planning in Context

Currently scenario planning is perceived by many as being associated with the prescriptive planning and positioning schools and is used as a predictive tool to generate strategic options and core strategy. This view was reinforced by Porter (1985: p446) who stated that "*a scenario is an internally consistent view of what the future might turn out to be*". Porter sees scenarios as particularly useful in systematically exploring the possible consequences of uncertainty for an organisations choice of strategies. That is, scenarios can help organisations assess whether or not their strategy is appropriate for a range of possible environments in which the organisation may have to operate.

Porter is not alone in associating scenarios with the prescriptive schools of strategy; Mintzberg *et al* (1998) also situates scenarios in the positioning school as do Lindgren and Bandhold (2003), amongst others, who take the view that scenarios are about a planning process. However, according to Ringland (2002: p3), there is an important distinction between scenario planning and traditional strategy planning techniques. "*Scenarios*" for Ringland "*are tools for examining possible futures. This gives them a clear and distinctive role compared with standard toolkits or techniques that may be based on a view of the past*". In a changing and unpredictable environment, the identification and assessment of possible future environments for the organisation is an excellent method for promoting responsiveness, adaptability and preparedness.

Looking at Ringland's (2002) view of scenario planning from the firm based perspectives of strategy, an important aspect of scenario planning is that it provides direction for the acquisition and development of resources, competencies and capabilities. As importantly, scenario planning, on its own and through its integration with prescriptive strategy formation and the firm based views of strategy, will help organisations adapt to the future as it occurs rather than set a course for the wrong future and end up with an organisation that is not appropriate for the future environment in which it will have to operate.

The views of Porter (1985), Mintzberg et al (1998), Ringland (2002), Lindgren and Bandhold (2003) and most other strategists, is that scenario planning is a framework or tool that can be useful as part of a wider strategy planning process. Such usefulness manifests in providing strategists with a future orientated analysis of the environment and allowing strategists to test the consistency and robustness of strategies that have already been formed through traditional prescriptive and firm based strategy processes.

But scenario planning, in the context of an integrated strategy platform with cognition as the core strategy, is much more than its current role. Scenarios in this context move from a peripheral role in a planning process to a central role in a thinking process that is strategy formation. In the words of Coyle (2003: p308) it is time "*to introduce the art and practice of thinking intelligently about the unknowable future*". This changes the emphasis of scenarios from scenario planning to scenario thinking.

5.2.2 Cognition and the Importance of Strategic Conversation

Scenario thinking helps organisations structure their worldviews, mental models and belief systems around the potential future environments in which their decisions, both current and future, might be played out. This is premised on a set of scenarios or stories about the way the world might turn out tomorrow and thereafter, and these stories help the organisation recognise and adapt to change in their present and future environments. In essence, scenarios provide organisations with a range of possible future views of the world in which actors in the organisation can make informed decisions based on strategy

that is formed with knowledge and insight. Such strategy is more likely to succeed – especially in complex environments.

The process of developing scenarios often results in greater clarity and a better informed point of view on the potential shape and characteristics of the future external environment. In the traditional scenario planning view this process will be discrete whereas in the scenario thinking view the process will be continuous. In either view the process generates individual and organisational learning through the medium of strategic conversation, the alignment of perspectives amongst actors in the conversation, and the constantly evolving cognitive maps of decision makers in the organisation.

The process of scenario thinking consists of two elements: an ongoing strategic conversation between actors in the organisation, and a continuous process of learning as the conversations evolve. This evolution takes place as the actors internalize what they are hearing and perceiving, change their mental maps, and communicate their new mental maps in conversation.

This process starts with the creation of scenarios that are communicated in the form of stories about the future. Generally, the process changes individual and organisational mental-maps, fosters out-of-the-box thinking, overcomes 'Groupthink', expands thinking horizons, and helps anticipate unconventional risks and changes in the 'rules of the game'. While there is a specific scenario creation process, and it expands individual cognition along a number of dimensions, it is usually informed by the theories and frameworks of the prescriptive environmental views and firm based views of strategy.

The process of scenario creation is the first step in aligning perspectives and views and creating a common language throughout the organisation - at individual, team and organisational levels. What now needs to be fostered is an ongoing strategic conversation at all levels of the organisation that will evolve individual mental maps and the scenarios as individuals and the organisation learn about the future. This is an ongoing and iterative process that ensures the organisation is always prepared for the evolution in its operating environment and is able to cope with such evolution better than its competitors.

The continuous and exploratory process of creating scenarios, communicating the scenarios as stories, encouraging strategic conversations around the scenarios, evolving the scenarios through the conversations and learning, and repeating the process *ad infinitum* results in a constant flow of robust strategic options and informed once-off and ongoing strategic decision making activity.

Of particular interest to this thesis are the integrating effects of the scenario thinking process. In *figure 26: The Core Process for Strategy Formation*, it was clear that the process of cognition that leads to the point of decision was informed, iteratively, by both the prescriptive environmental and descriptive firm based perspectives of strategy. Similarly, the process of scenario thinking is also informed by the two perspectives in an iterative fashion, but the relationship between scenario thinking, the environmental perspectives and the firm based perspectives is symbiotic. Each informs the other as the core process of cognition draws them together. *Figure 27: Scenarios as an Integrating Mechanism* illustrates this concept.

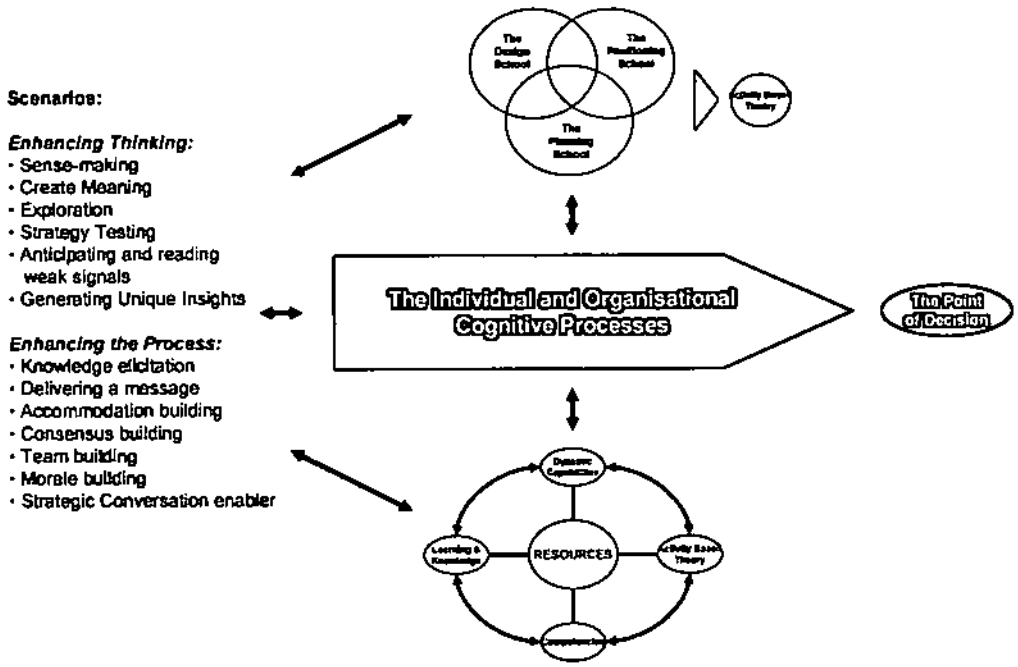


Figure 27: Scenarios as an Integrating Mechanism

This integrated model, incorporating scenario thinking, has the ability to provide a premise for a truly robust strategy formation process with both a present and future orientation and a capacity to deliver an immediate and sustainable competitive advantage to organisations. According to van der Heijden (2005: p134) "*scenarios make sense of future events in the same way as historical accounts make sense of the past ... while the present is always a blur, history that comes out of it is well ordered*" and clear. By taking a view of the future, "*the present blur clears up; storytelling creates historical order out of chaos*". The scenario thinking view, through a continuous process of individual and organisational storytelling and learning and built on ongoing strategic conversations, creates an organisation that is constantly learning about the future. And, when the future comes, the organisation is ready for it. This may well be the best and most sustainable way of creating competitive advantage for organisations.

Furthermore, strategy theory built around the premise of *Figure 27: Scenarios as an Integrating Mechanism* would have both an explanatory and a predictive capability and would not be rooted in history, the present situation, pattern and trend analyses, dynamic capabilities and hopes that the two strategy perspectives that sustain these roots will provide a solution for an uncertain and complex future. This perspective would require additional research to establish it as mainstream strategy theory but it has been listed as a research opportunity in *section 5.3: The Research: Limitations and Opportunities.*

5.3 The Research: Limitations and Opportunities

The biggest challenge in writing this thesis was finding a balance between too little research to support the argument for an integrated theory of strategy formation and too much research that results in some of the research being redundant. This necessitated the establishment of a statement of scope which facilitated a clear definition of the boundaries of the research.

As a result of this approach a general rule was applied: where a perspective or view could not add substantially to the argument or the development of the integration models it was ignored or received somewhat shallow treatment in the literature review. Obviously this was a subjective decision on the part of the author of this thesis.

However, this was not always an ideal approach because much of the research that was not used for the development of this thesis contained nuances that could have led to a refinement of the argument and the integration models.

The upside of this approach is that the resources available to the author of this thesis were better utilised, but the downside is that the research could have been richer and more robust had the author been able to fully explore the literature. This does, however, provide opportunities for further research on some of the theories, perspectives methods and approaches that were not fully investigated in this research.

Another area of limitation and opportunity arises out of the research design and methodology which, because of limited resources and the objectives and practicalities of conducting the research and writing this thesis, uses only secondary data to develop the argument that is central to the thesis. There were a number of reasons for this approach:

- There is a need for the integration of existing theory before new theory is developed. Failure to do this will make the current state of fragmentation and theoretical pluralism worse.
- The research is focused on developing theory and models that integrate existing strategy theory and helps converge the many currently fragmented perspectives.
- Most of the existing theories and perspectives of strategy formation have used primary data that has been validated by empirical research. Validation of the data used for this researeh is therefore not necessary, but the new theory and models developed for this thesis will require some empirical validation.

Obviously, the need for empirical validation of some of the research findings in this thesis provides for further research opportunities.

A number of specific research opportunities were identified during the course of conducting this research:

- Current theories on strategy formation are narrow in their perspectives and, as a result, tend to highlight the differences between the theories rather than what is common to the theories. Further research into the common aspects of the various and numerous theories such as systems theory, individual and organisational

cognition and economics would provide further validation for the findings of this thesis and open up new avenues of research.

- The many theories of cognition and learning, as applied to strategy formation, need integration. These theories show the highest level of narrowness and fragmentation of all theory that contributes to the strategy discipline.
- Developing the scenario framework, from a thinking and planning perspective, into robust theory that is core to the strategy formation process. This will also establish an explicit future orientated strategy process for managing complexity and uncertainty in the environment.
- Strategy formation is rooted in history and organisations make plans for the future based on extrapolations of the past. It is necessary to finds theories and processes (scenarios?) that will enable organisations to make better sense of the future and develop strategy that accounts for historical continuity and future discontinuities.
- Research on cognition and strategic conversation in organisations and how it enhances and/or inhibits the process of strategy formation in organisations.

While this list is far from exhaustive, research in the areas suggested will help organisations address many of the challenges they face that currently do not have solutions.

5.4 Conclusion

The rapid and discontinuous change that characterised our world during the last half of the 20th century and the first years of the 21st century brought with it great complexity and concerns about how we, as individuals and organisations, can manage the resultant uncertainty. Answers were sought in domains and disciplines as diverse as politics, military strategy, economics and social sciences that would allay these concerns. Eventually, these efforts converged on the strategy discipline, where the environmental and firm based views of strategy formation emerged.

The development of strategy paradigms, such as the prescriptive environmental and descriptive firm based views, over the last fifty years happened in conjunction with an exponential increase in environmental complexity and uncertainty. The current strategy paradigms, while providing partial solutions to the problems of complexity and

uncertainty, still cannot address the issue of the management of uncertainty in future contexts and environments. Organisations, in an effort to find competitive advantage through the application of relevant and effective approaches to managing the future and its inherent uncertainties, has gone from trying to control the future (prescriptive environmental approaches) to letting the future evolve and responding (descriptive firm based attitudes) without finding a definitive solution to the problem. This has led to concerns that strategy, in its current form, is losing relevance in an increasingly complex and uncertain environment. It was against this background that this research was conducted.

The question of relevance has been addressed by a number of prominent academics, amongst them Grant (2002b: p92) whose concern about the current state of strategy is captured in his comment that he "*wants to see more than routine volumes of inconsistent and inconsequential empirical testing*", Chakravarthy and White (2002: p182) who see "*too much business as usual*", and both Garud and Van de Ven (2002: p206) and Venkatraman and Subramaniam (2002: p461) who use the same phrase: "*strategy is at a crossroads*". Whittington, Pettigrew and Thomas (2002: p475) capture the sense of frustration and the desire to move forward that seems to characterise these writings in their comment that strategy is at last starting to move "*beyond the constraints of its origins in the modernist social sciences of the mid 20th century*".

Each of the writers reviewed in this thesis has a different perspective on the issues that strategy faces, how to address these issues, and how to best address the problem of relevance, given the state of strategy and increasing complexity in the environment, but there are commonalities in many of their concerns. The words 'fragmentation', 'narrow perspective', 'cumulative', 'synthesis', 'integration' and 'structure' are frequently used terms in the vocabulary of their articles, and this points to a need for new theory that creates a platform on which strategy can continue growing as a discipline. It is hoped that The Integrated Model of Strategy Formation presented in this thesis can act as the platform on which new and relevant strategy theory can emerge.

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