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Emotional Processes in Strategic Management: The Role of Positive and Negative Affect in Biasing Perceptions of the Organisational Environment

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ABSTRACT

Effective strategic-level planning and decision-making are vital processes for an organisation's long-term success. Strategic decision-making is difficult to perform effectively due to both the density of data contained in the strategic environment and the often ambiguous and incomplete nature of this data. Daniels (1998) found evidence for a link between perceptions of aspects of the organisational environment germane to strategic decision-making and managers' trait negative affect. The present study sought to replicate this finding and extend this line of research with positive affect. The present study employed a cross-sectional, correlational design. A total of 150 managers employed in a range of businesses in New Zealand returned questionnaire forms mailed out to them. The hypothesis that positive affectivity could influence perceptions of the organisational environment was supported. A systematic relationship in the hypothesised direction was found between Positive affectivity and managers' perceptions of their organisational environments. Contrary to the findings of Daniels (1998), no support was found for a relationship between negative affectivity and managerial perceptions of their organisational environments. Some evidence was also found for an interaction effect between negative and positive affectivity and managerial perceptions of the environment. The implications of the results obtained are that positive affectivity may work to bias the cognitive processes of the strategic decision-maker when he or she is scanning the strategic environment for relevant data. It is concluded that emotion must be considered a substantive factor for future strategic planning research.

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'Education made us what we are'

(Helvétius, 1715-1771)

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INTRODUCTION

The role of cognition in management has been well researched (Oatley & Johnson-Laird, 1987). However, though interest in emotions is rising amongst organisational researchers, the role that emotions may play on cognition in the workplace has received relatively little attention compared to cognition (George, 1992). Nonetheless, there is an increasing body of laboratory and organisational research that suggests that emotions have great potential to impact on the perceptions and day-to-day activities of individuals within organisations (Brief, Burke, George, Robinson, & Webster, 1988; Cote, 1999; Day & Silverman, 1989; Dunegan, Duchon, & Barton, 1992; Halberstadt & Niedenthal, 1997). Researchers have found evidence for the role of affect in a range of organisationally relevant contexts. For example, in levels of work-related distress (Brief et al., 1988) and job satisfaction (Clark & Watson, 1991), with risk taking behaviours in organisational contexts (Williams & Voon, 1999) and in acts of spontaneous pro-social organisational behaviour (George & Brief, 1992). This evidence suggests that emotions may 'colour' individuals' cognitions in such a way as to affect what they perceive, how they construct their reality and thus how they determine what behaviours to enact and what decisions they make (Oatley & Johnson-Laird, 1987).

The effective development and implementation of strategy is a significant factor in ensuring an organisation's long-term success (Porter, 1980). Considering the salience of effective environmental scanning to strategic decision-making, this emotion -> perception relationship could have ramifications for strategic planning

and is an issue that deserves exploration (Oswald, Mossholder, & Harris, 1994; Daniels, 1999). Unfortunately, very little research tests the emotion-perception relationship in the context of strategic level decision-making. Daniels (1998) however, concluded that there was evidence for the relationship between manager's trait Negative Affect (NA) and their perceptions of environmental elements germane to strategic planning. Negative affect is a broad, over-arching personality dimension that subsumes a number of specific negative emotional states, e.g. anxiety, depression; likewise with Positive Affectivity (PA), which subsumes a number of positive emotional states, e.g. excitement and enthusiasm (Watson & Clark, 1984; Clark & Watson, 1991). The present study seeks to gather further support for the potential for emotions to impact on managers' perceptions of their working environment and will seek to replicate Daniels (1998) study with negative affect. The present study will furthermore extend this line of research by testing for the potential role of positive affect in the biasing perceptions of the organisational environment.

To understand the role of emotions in strategic planning it is first necessary to outline the process of strategic planning and then discuss the nature of organisational decision-making (which includes both how the data to be analysed by the manager is gathered and also the cognitive processes that are involved in the analysis proper). With this framework laid, the hypothesised role of affect in this process is discussed and the modes that affect may employ to effect perceptual biasing are explicated. An historiographical explanation is then provided to place the development and present state of research in this general area in context. Finally, evidence from a range of clinical and organisational

studies, with varying but related research focuses, is presented that provide support for the role and importance of affect within the organisation.

STRATEGIC PLANNING AND ORGANISATIONS

Strategic planning involves developing a broad formula for how a business is going to compete, what its goals should be and what policies will be needed to carry out those goals (Porter, 1980). Effective strategic planning makes a significant contribution to an organisation's long-term success and research has shown that those organisations that do engage in effective strategic planning invariably outperform those that do not (Boyd, 1991; Bowman, 1976).

The process of effectively developing and implementing strategy is both vital to an organisation and extremely difficult (Porter, 1980). It is vital because issues such as market positioning, key product development and organisational direction are some of the most significant indicators of organisational success. Furthermore, these objective factors are influenced by how managers construct and make sense of the internal organisational and external market environments (rather than the environment being acted on purely objectively) (Paton & Wilson, 1997). This is especially true for any business that operates in a highly dynamic market sector. Opportunities and advantages in sectors such as this are difficult to predict and, once gained, transient in nature. Even in more stable market environments the ability to make predictions about potential opportunities and challenges up to five years ahead of time is an invaluable asset.

Strategic planning is difficult because it is invariably undertaken in a context of limited and ambiguous information. Ambiguity is not the same as uncertainty. In cases of uncertainty alternatives are given, even if their consequences are not. With ambiguity almost nothing is given or understood (Mintzberg, Raisinghani, & Theoret, 1976). A strategic decision process is one that is "...characterized by novelty, complexity and open-expectations, by the fact that the organization usually begins with little understanding of the decision situation it faces or the route to its solution, and only a vague idea of what that solution might be and how it will be evaluated when it is developed." (Mintzberg et al., 1976, p. 250). Meaning is imposed upon this ambiguity through the cognitive processes of the individual (Senge, 1990).

What constitutes a strategic decision will vary from organisation to organisation – what is a big matter to one organisation can be less significant to another (Hickson, Butler, Cray, Mallory, & Wilson, 1986). One reason for this is that strategic issues do not have an inherent meaning - meaning must be imposed upon the data used to make a decision (Dutton & Jackson, 1987). The meaning that is imposed is a product of the individual's inherent perspectives and biases (cognitive and emotional) and the organisations internal environment (e.g. organisational culture). Two of the most common meanings or labels applied to strategic issues are threat and opportunity. Because meaning is imposed not inherent, differing organisations will interpret events differently. And because organisations respond to events based on their meaning, different organisations may well initiate unique responses to the same or very similar environmental events (Dutton & Jackson, 1987).

Strategic planning is not necessarily a process that is carried out by a single individual, or even a group of high-level managers. It is also a social process that occurs at all levels within an organisation, not just at the top-management level (Oswald et al., 1994). Indeed, top managers may be less in contact with the complex and turbulent environment than those at lower levels within the organisation (Johnson & Scholes, 1999). This type of multi-level participation generally enhances the effectiveness of the planning process. Though there is potential for departmental parochialism to adversely bias the scanning process, e.g. the finance, production, marketing etc department may attend only to issues that affect them directly, rather than seeing the 'big picture' (Johnson & Scholes, 1999). A significant reason for multi-level participation enhancing planning is that organisational personnel of varying statuses have access to different types of information and have differing perspectives due to their organisational roles, and have varying histories. For example, it has been demonstrated that managers of differing levels vary in their perceptions of their organisation's strengths and weaknesses (Ireland, Hitt, Bettis, & Auld de Porras, 1987). Furthermore, managerial perceptions of how uncertain an organisation's environment is also appear to vary with management level and with the quality of the organisation's communication and information dissemination structures (Hunton, Wall, & Price, 1998). Ireland et al. (1987) found that lower-level managers perceived significantly greater environmental uncertainty compared to middle-level managers, but not top level. This indicates that the information available to managers, as well as the decision heuristics that they use, can alter their perceptions of uncertainty within a firm.

DECISION MAKING AND ORGANISATIONS

At the heart of strategic planning is strategic decision-making (Eden, 1992; Nutt, 1984). Due to their complexity, scale and the potential internal political ramifications of such important choices, strategic-level decisions are the most difficult decisions an organisation ever has to make. They are made difficult by the fact that they involve a significant degree of guesswork or speculation due to the need to project events years in the future and the need to cognitively integrate a massive amount of, often vague, dynamic and ambiguous, environmental stimuli and market sector indicators.

Early models of decision-making were termed normative and were descriptions of how decisions should be made, not necessarily how they were made (Mason & Mitroff, 1981). A normative model of decision-making includes a number of steps that should be followed on the way to developing the best possible solution for the organisation. Typical steps are: *specifying organisational goals and objectives* (what the organisation is trying to achieve), then *performance criteria* are derived from these goals (clear definitions of how the objectives are to be measured so that the organisation can assess its progress in achieving the objectives it has set itself), the *problem is identified* and a *search for alternative solutions* is initiated, a *choice* is then made from the alternatives generated, the decision is subsequently *implemented* and its effectiveness is *monitored* (Jennings & Wattam, 1994). Normative models are not widely employed now as empirical research has demonstrated that they are rarely, if at all, employed in actual organisational

settings (Nutt, 1984). They would be impossible to employ in the uncertain climate of the strategic environment.

In fact, though strategic decision-making proceeds through a number of phases on the way to a resolution it does not necessarily follow a simple sequential relationship between these phases; rather it is an often iterative and disjointed process (Witte, 1972). Mintzberg et al. (1976) define three main phases of organisational decision-making - *identification*, *development* and *selection*. Identification involves recognising the existence of a problem and then determining the nature of the problem. Development consists of searching for solutions, either ready-made, custom-made or a combination of these two (i.e. modifying a ready-made solution). Finally, in the selection phase, possible alternatives are screened out until just a few feasible ones remain, a final selection is made from the few remaining options and approval for the option selected is sought from within the organisation (Mintzberg et al., 1976). Nutt (1984) expanded the steps in the decision process to five - *formulation*, *concept development*, *detailing*, *evaluating* and *implementation*. Studying 78 organisations, Nutt identified a number of different types of decision processes used in organisational contexts: the historic processes model, off the shelf, appraisal, search and nova processes. Each process included a number of variations on the archetype. Not all of the decision processes identified used all of the five decision steps; each begins with formulation and ended with implementation but the distinguishing characteristics of each process were the steps used in between (Nutt, 1984). The historic processes model, for example, uses the stages of formulating, detailing and implementation, while nova processes (an approach emphasising innovation)

employ all the stages. Nutt found that managers did not use the normative models of decision-making developed by theorists and the great majority of processes employed were solution centred (thus restricting the potential for innovation) and curtailed the number of alternative considered.

The last decision-making phase is also the beginning of the decision-implementation phase. That is, the strategic decision has been made and now the rest of the organisation must accept and act on the decision for it to be effective. This is much more than a simple process of top-down implementation, i.e., the top-level management pushing the decision down upon the rest of the organisation (Humphries & Marshall, 1995). If the decision does not, at the very least, generate compliance amongst the organisation's members then it is an easy process for employees to hinder or block the decision. Temporary coalitions may form amongst hitherto disparate elements within the organisation, united by the superordinate goal of defending themselves against the perceived threat that the decision represents. Individuals and groups may choose to oppose a decision or new strategic direction because it represents a threat to vested power bases, because change means uncertainty which is inherently threatening to most people, or because of misunderstanding and interpersonal conflict within the organisation (Senge, 1990). Emotions have the potential to impact on decision implementation through not only intrapersonal processes such as colouring perceptions of the environment but also through intragroup processes (Daniels, 1999).

SCANNING THE ENVIRONMENT

A crucial aspect of the strategic decision-making process is scanning and analysing the environment (both internal and external) the organisation faces (Fahey & Narayanan, 1986). Effective scanning can be beneficial to the organisation. Bowman's (1976) comparison of high-performers versus low-performers in the food-processing industry (i.e. those in the top quarter versus those in the bottom quarter) demonstrated that the more successful companies engaged in considerably more environmental analysis than the less successful companies.

The nature of the environment the organisation operates in will determine the nature of its strategic planning process (Johnson & Scholes, 1999). Environments can be characterised by two factors: how dynamic the environment is, and how complex the environment is. Together these two elements determine the nature of the environmental uncertainty that the organisation faces and interact to produce specific environmental conditions (Duncan, 1972). For example, when the environment is simple and static technical processes will be fairly simple and competitors remain the same over time. Change is likely to be predictable, so analysing the environment from a historical perspective can be employed to gauge future trends. When the environment becomes dynamic it is changing rapidly but it is not necessarily too difficult to understand. For effective strategic planning in this context organisations need to encourage their members to be intuitive and challenging when thinking about possible future environmental conditions. When the environment becomes complex then it has become too difficult to

understand. Furthermore, imposing meaning on this uncertainty can have costs that increase anxiety, i.e. the manager can never be sure that they have made the 'correct' decision in such a situation. High technology industries face a complex environment. Complexity cannot be adequately dealt with by analysis. Depending on the exact nature of the complexity the organisation may adopt a decentralised structure and allow sub-units the authority to deal with their part of the environment (Johnson & Scholes, 1999).

Top-level managers spend up to a quarter of their time monitoring the environment (Boyd & Fulk, 1996). When engaged in environmental scanning managers are conducting a schema driven search for data regarding events and causality that would enable the task of setting the company's future direction to be performed more effectively (Aguilar, 1967). Scanning in a strategic context is made more difficult because of the typically dynamic and nebulous nature of the environment (Staw & Barsade, 1993). Though the aim of environmental analysis (both internal and external) is to be objective, research indicates that flaws inherent in human cognitive processes can vitiate the validity of the analysis (Oswald, Mossholder, & Harris, 1997; Walsh, 1995). For example, people tend to impose casual explanations on phenomena that are random (Feller, 1968; Tversky & Kahneman, 1971) and tend to see the actions of other groups as the intentional result of centralised direction and planning, rather than a result of accidents, coincidences and of unintended consequences (Jervis, 1976). Individuals also tend to assume that the size of an effect must be similar to the size of the cause (Kelly, 1973), overestimate the role of internal factors in the behaviours of others (Ross, 1977) and tend to make erroneous intuitive estimates

of correlation between environmental variables (termed an illusory correlation) (Maitlin, 1996).

The nature and complexity of the environment that faces the strategic analyst means that it is simply impossible to analyse the environment in its entirety (Senge, 1990). Managers, as with anyone facing complexity, simplify the task facing them by 'filtering' or attending to only select areas of the environment, i.e., areas that they consider salient. Thus, not all issues that are theoretically 'visible' to the strategist will actually be perceived. Both individual and organisational filters operate to limit the number of issues that come to the individual's attention (Dutton & Jackson, 1987). Individual filters may include past experiences and one's position within the organisation (e.g. finance personnel will tend to have differing filters to production personnel). Organisational filters include the organisation's present strategy and market sector. Emotion can begin affecting the strategic planning process from the very beginning by influencing what individual and environmental filters are operating. The instrumental perspective on the relationship between personality and emotion holds that certain personality dimensions foster the creation of specific life circumstances, and that these lifestyle differences then promote differential levels of long-term positive and negative affect (McCrae & Costa, 1991). Thus, as individual filters are at least partially built upon expectancies created by life experiences, emotion helps to shape individual perceptual filters. A manager will also tend to give attentional resources to the more familiar aspects of the environment (because they are more certain and thus perceived as controllable) (Walsh, 1995). This can lead to the analyst missing new competitive developments. Linked to this, managers will

tend to pay attention to elements that were historically important to the organisation; obviously these issues may now be out of date. Managerial assumptions may also be biased by the assumptions implicit in the organisation's culture - environmental analysis and strategy development can thus derive from the organisation's taken-for-granted assumptions and routines (Johnson & Scholes, 1999).

COGNITIVE PROCESSES - SCHEMAS AND BIASES

Issues that come to a manager's attention are vulnerable to the effects of distortion and biases inherent in his or her cognitive processes. Individuals analyse events around them by comparing them with pre-existing knowledge systems, known as schemas (Ireland et al., 1987; Norman, 1976). Schemas represent the accumulated life experiences of the individual. They are theoretical models of cause and effect relationships and are used to give meaning to observed actions or events. In the context of strategic management, the environmental variable to receive attention from the decision-maker will be affected by his or her schemas (Ireland et al., 1987). Because schemas are developed through life (i.e. work) experiences, managers at different levels within an organisation may perceive the firm's competitive strengths, weaknesses and environment differently (Ireland et al., 1987). Associated with schema theory is categorisation theory. Categorisation theory "...describes the formation and use of natural and social concepts of objects by individuals to organise their worlds." (Dutton & Jackson, 1987, p. 78). Individuals group sets of objects with similar attributes into cognitive categories. This reduces a large number of individual items into a

smaller set of related items. Script theory is similar but describes schema that specify the sequencing of events (Abelson, 1981). A manager's impression of the environment produced by this strategic analysis process is inevitably then an oversimplification - a necessary acquiescence to the exigencies of the data-rich environment and the inherent limitations of human information processing capacities.

Once a strategic issue has passed the organisational and individual filters and come to the attention of the strategists, it is labelled and categorised. Two of the most salient strategic issue categories are 'threat' and 'opportunity' (Dutton & Jackson, 1987). Affective state is known to be able to moderate the interpretation of environmental stimuli as threatening or unthreatening (Mathews, 1993). Emotional biases also play a role in the individual's filters, affecting what is perceived and thus eligible for categorisation (Williams, Watts, MacLeod, & Mathews, 1988). Once an object is categorised it, over time, begins to take on more of the characteristics of the category itself, and thus becomes a distorted and simplified representation of the original (Alba & Hasher, 1983). Furthermore, in cases of incomplete information regarding a stimulus, the individual will tend to ascribe the typical characteristics of the category to the item to fill the gaps the missing information creates (Cantor & Mischel, 1977; Loftus, 1979). As most strategic-level information is ambiguous and uncertain, generalising from the item's category may be a relatively common occurrence.

Schemas are not foolproof mechanisms however. A number of factors may lead schemas to produce flawed analyses. Firstly, events used to construct the schema

may be mislabelled and/or misinterpreted, possibly due to previous flawed analyses. Thus, the schema can become a proverbial 'house of cards' – built with flawed interpretations based on flawed interpretations (Ireland et al., 1987). Furthermore, schemas are fundamentally historical in nature, so managers are operating on a representation of how the world used to be – which is not necessarily how it is today. Thus, the validity of the schema is sensitive to changing conditions (Keisler & Sproul, 1982).

Schemas are also affected by cognitive biases. When making judgments under uncertainty individuals typically enact a range of cognitive short cuts, or heuristics. These heuristics simplify the decision processes and are generally valid mechanisms for this purpose, but sometimes they also lead to systematic and predictable errors (Tversky & Kahneman, 1974). Individuals employ a variety of heuristics, for e.g. representativeness, means-ends, anchoring and adjustment, alignment and rotation (Matlin, 1994). But perhaps the most consequential heuristic in the context of strategic management is the availability heuristic (Ireland et al., 1987). When using this heuristic people assign weights to data and thus make decisions based on how easily the data is recalled from memory. The more salient a stimuli or event is to an individual the more it is likely to be attended to and encoded in memory, and so recalled.

Because schemas and categories are a product of subjective processes such as the individual's previous experiences, interpretations and assumptions, they will always be capable of producing error. However, they are necessary for individuals' effective daily functioning. Without them each event the individual

encounters would have to be rigorously analysed in a 'scientific' manner and this would result in the individual being rapidly overwhelmed with data and irrelevant analyses.

THE PLACE OF EMOTION IN THE STRATEGIC DECISION PROCESS

Thus, cognitive processes are both central to strategic planning and vulnerable to distortion due to the limitations of human processing capabilities. These vulnerabilities have been well documented (Walsh, 1995). Furthermore, there is much evidence to suggest that emotions can distort the cognition processes so important to effective decision-making (Daniels, 1999; Mathews, 1993). Incorporating Mintzberg et al.'s (1976) three main decision stages, figure one shows the relationship of the cognitive and social processes discussed to the decision steps. The three decision steps are placed in a linear arrangement because decision processes all begin with problem identification and end with solution selection. However, as indicated by the dotted, arrowed lines, this is an iterative process whose exact make-up is impossible to predict and dependent on contextual variables. Cognitive processes are an integral aspect of all three of the decision stages. Social influences work to affect cognition. The positioning of mood, or affective state, demonstrates that emotion has the potential to influence cognition directly (Daniels, 1998; Mathews, 1993) or indirectly through social processes (Hatfield, Cacioppa, & Rapson, 1992).

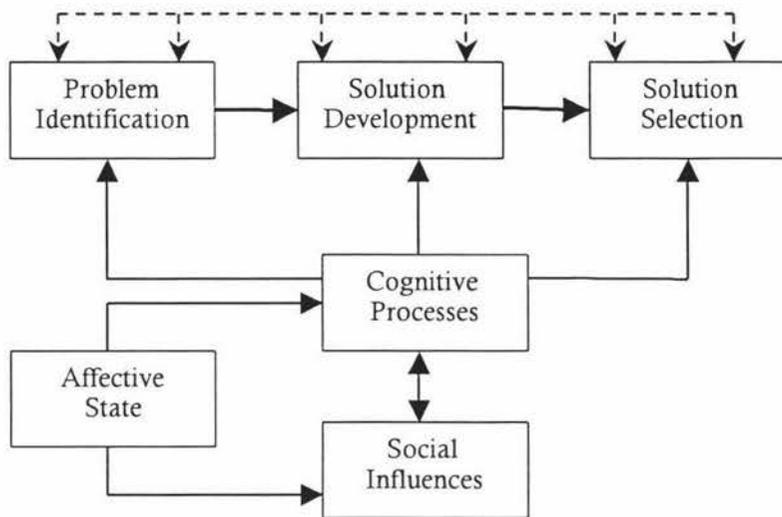


Figure 1: Mintzberg et al's (1976) three primary decision steps with cognitive processes involved in all three decision steps and social influences impacting on cognitive processes. Affective state is shown impacting on cognition directly, or indirectly through social influences.

By directly impacting on cognition emotions can influence decision-making in three major ways. Firstly, emotion may shape people's decisions by colouring the content of their thoughts. For example, negative affect has been demonstrated to cue similarly valenced material in memory, thereby distorting judgements, thoughts and perceptions (termed mood congruency) (Bower, 1981; Cunningham, 1988; Mayer, Gaschke, Braverman, & Evans, 1992). Emotion can influence what a manager sees, or chooses to see, in the strategic environment. Anxiety or similarly fearful emotions will tend to increase the number of threatening issues perceived in the environment (Mathews, May, Mogg, & Eysenck, 1990). Furthermore, feelings themselves may be used to provide information about an issue. The "how-do-I-feel-about-it?" heuristic involves a representation of the target in mind and inspecting any feelings that the

representation elicits (Schwarz & Clore, 1988). The feelings generated will be taken as valid if they are believed to be representative of the target and if the feelings towards the target are regarded as relevant (Pham, 1998). Secondly, emotion may interfere with the decision-maker's ability to process information. For example, anxious and sad individuals have demonstrated that they process information less systematically when making decisions and judgements (Conway & Giannopoulos, 1993). Finally, emotions may also affect decision-making by shaping an individual's motivations. For example, people in negative moods often display a heightened concern for elevating their mood state (Morris & Reilly, 1987). Likewise, individuals in positive moods tend to avoid actions that would threaten to disrupt this pleasant state (Isen & Geva, 1987).

It is possible for a common affective state to be spread amongst a group. Emotion contagion occurs when an individual's emotional state is transmitted to the other members of a group, typically from the group's leader or an individual displaying a consistently strong affective intensity (Hatfield et al., 1992). Individual affect has been found to be consistent within groups and positively associated with the affective tone of the group, while group positive affect is negatively correlated with absenteeism and negative affect is negatively related to acts of group prosocial behaviour (George, 1990). This phenomenon would typically occur when one individual within a group displays a consistently strong emotional state. For example, when two pairs of individuals were placed face-to-face for two minutes, it was invariably found that the mood of the more expressive individual had been transferred to the more passive member of the dyad (Sullins, 1991). If a departmental leader feels strongly emotional towards a proposed

strategic decision, it is possible that others in the department, especially those closest to him or her, may take on a shared affective state. If a common affective state were spread through a group at a meeting or debate for example, in this fashion this could bias information processing (and subsequent decision-making) towards or away from threatening information. Thus, group decision-making may take on the same qualities, vis-à-vis emotional interference, that has been explicated for individual decision processes.

In one of the few studies that have specifically examined the emotion and strategic management issue, Daniels (1998) found support for the emotion-perception link. Daniels conducted a cross-sectional survey of 272 managers' trait negative affect and their perceptions of four aspects of the organisational environment germane to strategic planning (perceived organisational performance, industry growth, complexity and competitiveness). Modest but significant relationships were found between the participants' negative affect and all four environmental measures (Daniels, 1998). The hypothesis that emotions can impact on decision-making has been further supported by research that found that sad and anxious subjects made systematically different decisions regarding the same subject (though this research examined laboratory gambling decisions, not organisational decisions) (Raghunathan & Pham, 1999).

The potential for emotions to impact on managers' perceptions and thus decision-making is very real. It is also an issue that has been under-addressed by researchers, at least partially due to historical developments (George, 1992).

ORGANISATIONS AND EMOTIONS

Organisations are a ubiquitous and all pervading aspect of our everyday lives. So much so that it is easy to forget that they are, in terms of human evolution, a recent phenomenon. Up until the 19th century free organisation was either impossible or regarded with suspicion (Albrow, 1992). Max Weber's writings on the bureaucracy, combined with rationalistic management theory, are the model on which the modern organisation is based. However, Weber's idea of bureaucracy was only a small part of his wider work on social relationships and order (Albrow, 1992). The subsequent commentators who have used Weber's work as the basis for a rationalistic model of organisation have suppressed the emotional dimension in his work, in the interests of the rational organisation. One result of this union of rationalistic management and Weberian bureaucracy has been the "institutionalisation of affective neutrality" (Albrow, 1992, p. 314). As this was a seminal time in the development of the bureaucracy the early direction taken during this period set the foundation for the subsequent model for organisations throughout the rest of the 20th century.

However, it is over simplistic to suggest that no emotions are tolerated in traditional bureaucracies - certain emotional expressions for example, often are condoned (e.g. anger & competitiveness) (Martin, Knopoff, & Beckman, 1998). Organisations have varying tolerances of, or norms regarding, emotional displays. However, an individual's normal emotional range is invariably restricted by organisational norms - both explicit and implicit. Unrestricted displays of emotion are not constructive for profit-oriented organisations as this would serve

to enhance the well being of the individual not the organisation as a whole (Hearn & Parkin, 1987). However, more restricted yet still open displays of emotion are permitted and even encouraged by some organisations, e.g. The Body Shop International (Martin et al., 1998). This type of emotional norm is called *bounded emotionality*. Bounded emotionality permits the expression of a wider emotional range than that typical of a traditional bureaucracy, while requiring individuals to be aware of the needs of the context in which the emotions are enacted (Mumby & Putnam, 1992). However, this type of emotional norm is very rare and most typically occurs in small, not-for-profit organisations (Martin et al., 1998). Some organisations may require their staff to display false emotions for instrumental purposes, a practise known as emotional labour (Hochschild, 1983). Examples of emotional labour include a salesperson's happy and enthusiastic manner when trying to make a sale and bill collector's hostility when collecting. Emotional labour can have negative personal consequences for the employee, such as drug use, excessive drinking, headaches, absenteeism, and sexual dysfunction (Van Maanen & Kunda, 1989; Waldron & Krone, 1991; Hochschild, 1983) and may reduce attentional resources, increasing the potential for accidents (Richards & Gross, 2000). Emotional labour is often subject to bureaucratic controls, for example, when supervisors closely monitor it (Martin et al., 1998).

This de-emphasising and restriction of emotions in organisations is reflected in the work of organisational researchers. During the '70s and early '80s cognitive processes were used to explain this aspect of human behaviour, i.e. individuals have limited processing power and so are bound to make perceptual and

judgmental errors (Nisbett & Ross, 1980). In their 1984 review, Weiss and Adler concluded that organisational researchers tended to hold personality constructs in low regard. However, the 1980s saw an increase in the role of emotions and nearly a decade later George (1992) could write that the situation was much improved and there was now more recognition of the role that personality may play in organisational life.

The origins of this lack of interest may be partially attributed to the fact that early researchers regarded emotions as largely non-functional, a leftover relic of our biological heritage (e.g. Darwin, 1872; Dewey, 1895; cited in Oatley & Johnson-Laird, 1987). However, research that is more recent has suggested that emotions do serve useful evolutionary functions. Oatley and Johnson-Laird (1987) conceptualise emotions as serving to impose certain modes of operation on the cognitive system. Emotions enable us to make transitions between goals and plans in changing circumstances and to communicate these changes to ourselves (Oatley & Johnson-Laird, 1987). Fear for example, is experienced when present behaviour conflicts with the individual's fundamental goals of ensuring safety and survival and the resulting cognitive mode that is imposed gives priority to processes that enhance scanning for threat and avoidance of any threat subsequently detected. Sadness is the result of the failure to achieve an important goal or complete a major plan and prioritises the processes necessary to cope with this failure and/or abandon any further attempts to achieve this goal (Mathews, 1993).

EMOTION AND AFFECT

The hypothesis that emotion can affect decision-making is indirectly supported through laboratory research. Typically, this research employs the concept of affect, rather than examining specific emotional states (e.g. Daniels, 1998; Brief et al., 1988; George, 1992; George & Brief, 1992; Raghunathan & Pham, 1999). Affect is a generic term that subsumes a variety of other terms such as preferences, evaluation, moods and emotions and consists of two broad, overarching and robust personality dimensions - Negative Affectivity (NA) and Positive Affectivity (PA) (Fiske & Taylor, 1991). Preferences and evaluations represent a positive or negative assessment of a stimulus. Emotions are characterised by greater intensity, relatively short term effects and are situationally determined, generally in response to an encounter with an event or person. Moods are enduring but low-intensity affective states (Kumar, 1997). Affect is especially appropriate for organisational contexts because, as discussed above, organisations tend to discourage overt displays of most emotions. As affect subsumes other constructs like mood and emotions, it is a better implement for detecting the less overt nature of emotional processes within organisations (Daniels, 1999). Though the similarity of the two terms NA and PA might suggest that they are the opposite dimensions of a continuum this is not the case. They are in fact highly distinct independent dimensions that can be meaningfully represented as orthogonal and appear to reflect fundamentally different processes (Watson & Tellegen, 1985). Moreover, PA and NA can work in combination to produce specific disorders, e.g. high-NA produces anxiety, while high-NA combined with low-PA produces depression (Watson, Clark, & Carey, 1988).

Individuals high on PA have an overall sense of well being and view themselves as active, self-efficacious and pleasurable engaged with their environment. Such individuals perceive stimuli, think and behave in a manner supportive of positive emotions. Individuals high on PA are more likely to experience positive affective states over time and across situations. Individuals low on PA are more prone to non-pleasurable disengagement, have lower self-efficacy, and a weaker sense of overall well-being. Low PA is usually defined by terms reflecting lethargy or fatigue (Watson et al., 1988).

Individuals high on NA tend to view themselves as unpleasurably engaged and as distressed by their own thoughts and behaviours and the attitudes and behaviours of others. They tend to think and act in ways supportive of negative affective experiences and are more likely to experience negative affective states over time and across situations. Essentially, high NAs have an overall negative orientation toward themselves and the world around them. Conversely, individuals low on NA tend not to view conditions as upsetting and stressful and are less likely to experience negative affective states and think in ways promotive of such states (George, 1992).

These two dimensions of affective states (i.e. positive and negative affect) have different correlates (Watson & Clark, 1984), antecedents (Costa & McCrae, 1980), are differentially associated with life events (Zautra, 1983) and have been found to be independent even for short time periods (Watson, 1988; Watson,

Clark, & Tellegen, 1988), although they are not experienced simultaneously at intense levels (Diener & Iran-Nejad, 1986).

EMOTION AND COGNITION

During the 1980s, there was a debate amongst researchers as to the relationship between cognition and emotion. One side argued that emotion and cognition were independent phenomena (Zajonc, 1980). For example, it was observed that some emotional reactions appear to be instinctive and occur so rapidly that cognition could not have been involved. Likewise, abstract shapes that were presented to subjects at speeds far too fast to have been recognised, were subsequently preferred over shapes that the participants had never seen (Seamon, Marsh, & Brody, 1984). Proponents of cognition believed that cognitive analysis occurs both before emotion and is responsible for the emotional response (Lazarus, 1982). It is argued that emotions can occur so rapidly because cognitive appraisal also occurs very rapidly. Participants do not report this cognitive processing because of this rapidity - it is involuntary and non-conscious in nature. It is generally accepted that this debate has been concluded with the majority of opinion now supporting the cognitive interpretation (Mathews, 1993). Having accepted the cognition-emotion relationship, researchers have demonstrated in the laboratory that affective state does impact on perceptions. There are two primary mechanisms for this: influencing attention and influencing recall (Daniels, 1999).

Examples of attentional biasing are common in everyday life, for example, when one is in the market for a new house, one notices for sale signs everywhere. Likewise, if one has just bought a new car, one may suddenly start spotting numerous examples of that model of car around the town (Williams et al., 1988). Attention may be likened to a beam of light. When an individual's attention is focused on a subject the beam of light is 'narrower' and 'brighter', and the reverse is true when the individual's attentional resources are more broadly directed. Some areas just outside the focus of the light beam will be dimly illuminated and one will be likewise dimly aware of events there. If any relevant or salient stimulus occurs in these dimly lit areas the beam of light will 'snap' to the new centre of attention, and the stimulus will be available for a more rigorous evaluation (Williams et al., 1988).

It has been demonstrated that, when they are emotional, people are more likely to attend to emotional stimuli (Halberstadt & Niedenthal, 1997). Anxiety appears to induce people to perceive a greater proportion of negative elements in their environment and thus anxious people find the world a more threatening place (MacLeod, 1991). The fact that behavioural treatments for anxiety also reduce this attentional bias indicates that anxiety is the cause, rather than merely a correlate, of attentional bias (Watts, 1986; Foa & McNally, 1986). Moreover, it is probable anxiety and attentional bias has a reciprocal relationship. State anxiety causes the individual to scan their environment for threatening elements, the discovery of which feeds back into the individual's levels of anxiety (Daghighi & Watts, 1990). Evidence also suggests that this perceptual bias is not a result of the individual's current mood state, but an enduring feature of people who are

vulnerable to anxiety (Mathews et al., 1990). In the context of strategic planning, an anxious manager then would be likely to perceive a higher proportion of threatening issues in the strategic environment. Moreover there could be a reciprocal relationship between environmental uncertainty and levels of anxiety. That is, the ambiguous stimuli present in the strategic environment may be perceived as more threatening by an anxious individual, and this raised level of anxiety may make the environment seem to be more threatening and uncertain, which will then influence levels of anxiety. The individual perceptual filters of the anxious individual would be likely to 'tag' a higher proportion of threatening events as worthy of evaluation, and be more likely to interpret other issues as potential threats (Mogg, Mathews, Bird, & MacGregor-Morris, 1990).

Depressives on the other hand, show little evidence of this attentional bias. Instead, depressed individuals show a recall bias, that is, they find it easier to recall negative or unpleasant things regarding events (Watkins, Mathews, Williamson, & Fuller, 1992; Gilligan & Bower, 1984; Teasdale, 1983; Williams & Scott, 1988) and are slower to recall positive memories (Teasdale & Fogarty, 1979) than non-depressives. This effect has been replicated with a number of different levels of depression. Subclinically depressed, clinically depressed and subjects with induced depression have demonstrated mood congruent recall (Matt, Vazquez, & Campbell, 1992). Interestingly, subclinically depressed patients (i.e. the type most likely to be encountered in an organisation) displayed a phenomenon called depressive realism (Alloy & Abramson, 1988). That is, though they recall more negative things than nondepressed subjects, they actually recall a more balanced percentage of things than nondepressives, who are biased

towards recalling positive material (Matt et al., 1992). The depressive manager would thus be likely to construct a more negative interpretation of the environment when recalling aspects of it. That is, the evidence suggests that a depressive manager will scan the environment in a relatively typical fashion, but later when required to make a decision, will tend to interpret the environment more negatively, with a commensurate impact on subsequent actions (Williams & Scott, 1988).

Thus, anxious people will tend to regard their environment as more negative because they can perceive a greater proportion of negative stimuli than positive stimuli. While depressives will regard it as more negative because they can recall more negative than positive things about their environment (Mathews, May, Mogg, & Eysenck, 1989; Watkins et al., 1992). These biases may be related to the evolutionary function of emotions discussed above. If the function of emotions like anxiety and fear is to help identify and then avoid danger, then this is best done by the rapid perceptual encoding of threatening information, rather than engaging in a slower, more thorough evaluation of the stimulus. Depression, which is a pathological extension of sadness, requires a lot of elaborative processing as one reflects on the causes of one's failure (Mathews, 1993).

A number of laboratory and organisational studies have identified areas in which emotion plays a role in the workplace, and this work is briefly reviewed in the following sections. To summarise, research has indicated that the perceptual biasing process discussed above impacts on individual's assessments of

probabilities organisationally relevant decision choices in risky situations (Dunegan et al., 1992). Further, trait affective state is related to evaluations of how stressful the organisational environment is perceived to be (Munz, Huelsman, Konold, & McKinney, 1996) and levels of job satisfaction experienced by the individual. Research has also shown that a common affective state can be spread through a group (George, 1990) and that affect is linked to displays of spontaneous pro-social organisational behaviours (George & Brief, 1992). Though none of these studies directly address the area of strategic management they suggest that similar processes may occur in that context.

EMOTION IN ASSESSMENTS OF PROBABILITY AND EVALUATIONS OF RISK

Both Positive and Negative moods appear to have consistent effect on individuals' subjective assessments of probabilities. Happy people tend to be more optimistic about upcoming events, while sad people tend to be more negative (Wright & Bower, 1992). This is a significant issue when considering the salience of environmental scanning to effective strategic decision-making. High-PA managers may see the environment as more positive and adopt a more aggressive strategic plan for the organisation, while high-NA managers may adopt a more cautious policy. Conversely, the more negative perceptions of the NA manager may be advantageous in some circumstances. NA managers are more predisposed towards perceiving threat in the environment, which can actually be an advantage when the threat is genuine. Individuals with a positive mood state tend to consciously strive to maintain this positive mood and avoid

negative states (Clark & Isen, 1982). Thus, these individuals will avoid situations which would result in them experiencing negative affect and approach situations in which they experience positive affect, to the extent that they have a choice in the matter (George, 1989). For example, when a new competitor enters the marketplace NA would act (as one influence among many) upon a manager high in this trait to see the entrant as more threatening than might managers of a less neurotic disposition, and enact policy to deal with the new competitor before it becomes a significant danger. While on the other hand the high-PA manager may be more motivated to seek to avoid or 'filter out' a potentially unpleasant issue or threatening news.

How an individual perceives the environment has ramifications for the way in which he or she perceives risk. In this context, risk is used in the common usage sense (i.e. chance of injury or loss). Risky situations may be defined by the individual in terms of the probability of success multiplied by the utility of that outcome, plus the probability of losing multiplied by the negative utility of that outcome (Edwards, 1961). The perceived expected utility of the situation can be a prime determinant of whether the risk situation is acceptable or not. The strategic planning context is an inherently risky environment due to the uncertainty and ambiguity within the strategic environment. Every strategic decision is in essence a calculated gamble because of the informational constraints under which the decision-maker is operating.

Research indicates that our prevalent mood state can affect the level of risk we are willing to endure in a given situation. In studies of mood effects in betting

situations where the stakes are high, Positive Affect (PA) subjects were more risk averse than controls. Conversely, PA subjects became more risk prone when the consequences of losing were low. PA subjects reported more thoughts about losing when the stakes were high than did control subjects (Isen & Geva, 1987; Arkes, Herren, & Isen, 1988).

Nygren, Isen, Taylor, & Dulin (1996) termed this phenomenon *cautious optimism* and concluded that in these betting situations PA's employed a different decision rule to that of controls. High-PA individuals appear to focus on outcome values or utilities to the detriment of the actual probability of success. Thus, high-PA's are more likely to shy away from betting situations in which the probability of winning may be quite high but the loss associated with failure is also high. This may have ramifications for high-PA managers making strategic decisions in which the cost of a negative outcome is high, or in a situation where the high-PA manager can be seen as solely responsible for a decision, and thus the consequences of failure will be directly reflected back upon him or her.

The impact of negative mood on risk taking may also be a cause of self-destructive behaviour. Distressed subjects tend to choose more high-risk, high-payoff options. Feeling that they have nothing to lose, upset people attempt to escape their negative feelings by searching for a big (positive) payoff, but in the process run the risk of losing big and getting themselves into an even worse situation (Leith & Baumeister, 1996). Clearly, this type of behavioural response in a strategic context would have grave ramifications for the long-term survival of the organisation.

Analysis of specific moods within a general affective category (i.e. positive/negative) suggests that different moods can produce varying decision-making biases in these gambling situations. In the case of negativity, individuals may be biased toward high-risk/high-reward gambling options, while anxious people may prefer low-risk/low-reward options (Raghunathan & Pham, 1999). This may be because different affective states may convey different information to the individual experiencing them. Sadness conveys feelings of loss or that something is missing, because sadness is generally experienced when one loses something that is important, be it a person, object or opportunity (Lazarus, 1991). Thus, sad individuals are motivated to take high-risk/high-reward options to attempt to compensate for this loss. Anxious individuals on the other hand, are motivated by feelings of a lack of control. This translates to a desire to limit uncertainty and the choosing of low-risk/low-reward options (Raghunathan & Pham, 1999).

Organisational studies have provided the opportunity to refine the area of research. Dunegan et al. (1992) study generally supported laboratory findings while employing trained business people working on a task germane to their organisations. Furthermore, Dunegan et al introduced the variable of decision criticality - not all decisions facing organisational members carry the same degree of importance. NA subject accepted greater risk when the decision was of a more critical nature, while high-PA subjects were risk averse when criticality was high.

For the most part laboratory studies have examined risk situations in which the outcomes for individuals in good moods were immediate, personal and relatively critical. Williams & Voon (1999) assessed risk taking in an organisational setting that enabled them to explore beyond these limitations. Their study found that as participants' affective state became more positive, managers perceived situational framing as more positive and their beliefs that they could influence risky outcomes increased. Positive affect also increased the likelihood that people who perceived situations as risky would select riskier courses of action (Williams & Voon, 1999). The authors noted that risky decisions in this study were differentiated from previous laboratory research by being more temporally distant, reputationally relevant and strategically important. Thus, PA may increase the desire to benefit from gains when current affective state cannot be jeopardised by the possibility of immediate and conclusive negative decisional outcomes.

In short, strategic decisions are risky decisions for an organisation. Emotional processes have been shown to have an impact on decision-making in some cases in a counter-intuitive manner. Individuals with enhanced levels of positive affectivity often do make more risky decisions, as one would expect. However, their behaviours are dependent on context and if there is a perceived risk to the integrity of their positive mood state positive mood subjects actually tend to make more cautious choices. Similarly, negatively valenced emotions can produce riskier decision options in an effort to 'repair' their mood state. The fact that these mood based response sets tend to ignore probability of success have ramifications for decision-making in a strategic context. Managers may make

essentially 'selfish' decisions vis-a-vis the organisations future influenced by their negative or positive valence interacting with the situational context.

AFFECT AND WORK-RELATED DISTRESS

Many studies have examined the relationship between the individual's prevalent affective state and his or her evaluations of the stressfulness of the organisational environment and have documented that individuals high on NA tend to experience more distress than individuals low on NA (e.g. Brief et al., 1988; Costa & McCrae, 1980, Payne, 1988; Tellegen, 1985; Watson & Clark, 1984; Watson et al., 1988, Watson & Pennebaker, 1989). Decision-makers who perceive the environment as more stressful are likely to choose different options from those who do not perceive this stress and see the environment as a more welcoming and hopeful world.

NA has been demonstrated to play a role in observed job stress-strain relationships. Traditional job stress-strain literature shows an observable relationship between stressful work conditions and measures of worker distress. Brief et al. (1988) demonstrated that including negative affectivity in the stress-strain model significantly attenuated the effects of self-reports of stressors on self-reports of psychological well-being. Brief et al. conclude that NA should no longer be "...just a psychometric bother in job stress research but, rather, a theoretical variable with which to be reckoned." (1998, p. 197). Subsequent tests of the NA stress-strain relationship have produced mixed results. For example, while Brief et al concluded that NA did possess nuisance or method-effect

properties as regards relations with self-reports of stressors and strains other research has concluded that NA has no significant effect on the relations between stress and strain measures (Chen & Spector, 1991). Williams, Gavin, & Williams (1996) report that this confusion may at least be partially attributed to the methodologies employed in these studies. Further analysis employing more sophisticated statistical paradigms has demonstrated that NA substantively relates to work stressors and strains through high-NA individuals' perceptions, affective reactions and behaviours (Williams et al., 1996). Even these results are not conclusive, as these statistical methodologies still do not allow for conclusions as to the existence of causality or direction of causal flow. They do give a demonstration of whether a given theoretical model is consistent or inconsistent with the data being examined (Stone-Romero, Weaver, & Glenar, 1995).

It is likely that NA can induce greater feelings of distress through three mechanisms – the perceptual, temperamental and dispositional (McCrae & Costa, 1991). The perceptual perspective holds that high-NA individuals will tend to perceive more stressors in their environment (Williams et al., 1996). The temperamental suggest that traits such as NA may increase one's susceptibility or responsiveness to emotion generating stimuli (Bolger & Schilling, 1991). Thus, high NA individuals tend to respond to negative mood induction more strongly than those with lower levels of NA, and high-PA individuals tend to respond to positive mood induction more strongly than those lower in PA (Daniels & Guppy, 1997; Larsen & Ketelaar, 1991). PA increases enjoyment of positive stimulus, but does not necessarily reduce the impact of unpleasant stimulus, and vice versa for NA (Larsen & Ketelaar, 1991). On the other hand the instrumental

perspective holds that personality traits may result in or promote life situations or circumstances, and these differing circumstances promote differing levels of long-term positive or negative affect (McCrae & Costa, 1991). These three mechanisms have the potential to operate in combination (Williams et al., 1996).

Dispositional affectivity may also affect individual's levels of distress by altering their perceptions of control. As noted, negative affectivity causes people to recall negative information more easily, and makes it harder to recall positive information. Negative events are often aversive because they are less controllable than positive events. Thus, depressive individuals may develop an external locus of control because their recollections lead them to perceive the environment as less controllable (Daniels & Guppy, 1997). Internal locus of control has been demonstrated to have beneficial effects on well-being (Fisher, 1984; Ganster & Fusilier, 1989).

JOB SATISFACTION

Issues of distress in the workplace follow on to levels of job satisfaction. Theories of job satisfaction have historically focused on situational determinants, i.e. elements in the individual's environment that may act as stressors. More recently efforts have focused on the dispositional approaches to job attitudes. In support of the dispositional approach, consistent job attitudes have been demonstrated over time (Schneider & Dachler, 1978; Staw & Ross, 1985; Staw, Bell, & Clausen, 1986; Arvey, Bouchard, Segal, & Abraham, 1989). "Converging evidence from a variety of sources suggests (directly or indirectly) that two broad, overarching and robust personality dimensions are the dispositional determinants

of job satisfaction." (George, 1992; p. 187). NA and PA tend to be correlated with different facets of job satisfaction, and PA tends to be more highly correlated with job satisfaction than NA (Clark & Watson, 1991).

In a prospective study, negative affectivity in college students has been linked to a range of perceived job stressors (autonomy, role ambiguity, role conflict, workload, constraints and interpersonal conflict) and job strains (job satisfaction, work anxiety, frustration and somatic symptoms) (Spector & O'Connell, 1994). Adolescent dispositional affectivity can predict job satisfaction over the course of decades (Staw et al., 1986).

POSITIVE AFFECTIVITY AND PROSOCIAL BEHAVIOUR

Bearing in mind the organisation-wide nature of the strategic planning process and the need for input from all levels of the hierarchy to effectively analyse the strategic environment (Ireland et al., 1987), the spontaneous commitment of effort and attention by organisational members to this process is clearly advantageous. In fact, acts of spontaneous pro-social behaviour are an important characteristic of an effectively functioning organisation (Katz, 1964). Emotion is also implicated in these behaviours. Prosocial organisational behaviours are behaviours that are performed by organisational members with the intention or expectation that the behaviours will benefit the person, group or organisation at which they are directed (Brief & Motowidlo, 1986). Organisations cannot entirely rely on pre-proscribed systems and behaviour patterns, increasingly so in organisations whose external environment is unstable (George, 1991). Instead

organisational members must take it upon themselves to perform spontaneous constructive acts if the organisation is going to flourish. Types of organisational spontaneity include helping co-workers, protecting the organisation, making constructive suggestions, developing ones self and spreading goodwill (George & Brief, 1992). In George & Brief's (1992) model of organisational spontaneity, positive mood is a central construct and is regarded as a direct antecedent of spontaneous behaviour. Studies have demonstrated that individuals who experienced positive mood were more likely to engage in prosocial behaviour at work (George, 1991) and that a group's performance of prosocial behaviour is significantly and positively related to the group leader's positive mood (George & Bettenhausen, 1990).

The above evidence derived from laboratory and organisational studies demonstrates that affect impacts on both the perceptions and objective behaviours of organisational members. It seems most likely then, considering evidence such as this and the nature of strategic planning decision-making, that affect will impact on the strategic planning process in a broadly similar way.

The preceding discussion has outlined a number a significant points in relation to strategic planning, strategic decision-making, and the nature of emotion. In summary, these points were:

- Strategic planning and decision-making is a process characterised by uncertainty in which the strategic analyst must often impose subjective meaning upon ambiguous data scanned from the environment.

- The cognitive processes enacted to impose meaning on the (often) ambiguous data scanned from the environment are open to biases and flaws. Supporting this contention, a range of issues relating to the efficacy of cognitive schemata and decision heuristics were explicated.
- Emotion (in the present study operationalised as affect) was revealed to have the theoretical potential to further bias these cognitive processes. This biasing could occur on an individual level or through social processes (c.f. emotion contagion).
- An historiographical discourse was conducted that outlined the origins of 20th century attitudes towards emotions in the workplace. This analysis suggests that the limited interest in research into the role of emotions in the workplace up until the mid-1980s was not a product of a valid analysis conducted into the role of emotion itself. Rather, the lack of emotion related awareness in contemporary practices was a product of research biases that pervaded the theoretical paradigms during the first-half of the 20th century.
- Finally, clinical and organisational research was presented that examined differing but related research areas. These studies demonstrated that emotion has substantive influence in the workplace in the areas that these studies examined. These findings lend credence to the notion that

emotion has a role to play in the area of strategic decision-making and thus serve to validate the present research into this area.

Given the potential for dispositional affect to impact on individual's perceptions of their environment and the significance of environmental scanning to effective strategic decision-making this issue is one that deserves exploration. Therefore, the present study makes the following hypothesis:

Hypothesis one: Managers' trait Negative Affectivity levels will be systematically related to:

- perceptions of a more negative internal organisational environment
- a more complex and uncertain external environment
- and a poor view of the organisation's competitive strengths relative to its competitors

Hypothesis two: Managers' trait Positive Affectivity levels will be systematically related to:

- perceptions of a more positive internal organisational environment
- a more stable and less uncertain external environment
- and a positive rating of the organisation's competitive strengths relative to its competitors

Furthermore, given that Negative and Positive affectivity have been demonstrated to interact to produce specific mood states and that these mood states can bias information processing in unique ways:

Hypothesis three is that the interaction of NA and PA will produce systematic changes in perception of the organisation's internal and external environments and perceived competitive strengths.

Finally, it is noted in the literature that affect can act as a method effect variable between organisational indicators i.e. between the predictor and the criterion variables), producing artifactual covariance amongst these elements (Williams et al., 1996; Brief et al., 1988; Burke, Brief, & George, 1993; Spector & O'Connell, 1994). Therefore, *Hypothesis four* is that NA & PA will share variance with both perceptions of the organisational environment and certain organisational indicators.

METHODOLOGY

PARTICIPANTS

The target population for the present research was practising managers, i.e. employed managers, not those people studying for management qualifications like an MBA.

Though the present research is geared towards gaining insight into strategic-level decision-making processes this does not mean the participant sample should be restricted to managers at the very top levels of an organisation. Characterising an organisation's strategy formulation process as only occurring at the top level is inaccurate. Ireland et al. (1987) point out that the formulation of strategy occurs at all levels within an organisation and a number of managers have input into the process. In fact, managers' specific contributions to the planning process may vary by level (Taylor, 1979). Furthermore, managers' perceptions of their organisation's environment also appear to vary systematically with their level within that organisation (Ireland et al., 1987). Thus, it is valid for this research to include managers of varying levels, as this will provide a clearer picture of environmental perceptions.

Organisations throughout New Zealand were contacted and the nature of the organisation was not considered a significant factor. Prospective organisations were identified through telephone books, the Universal Business Directory and the on-line UBD.

MEASURES

The present study employed five pencil and paper psychometric instruments - two mood scales (negative and positive affect), and three environmental perception scales (perceived internal environmental uncertainty, perceived external environmental uncertainty and perceived competitive strengths and weaknesses). The paper-and-pencil measures were intended to be pithy and straightforward enough to be filled out unsupervised but still possessed sufficient psychometric integrity to produce a meaningful result.

Participant's prevalent emotional state was measured in terms of trait affect – both negative (NA) and positive affect (PA). Affect was sampled using the Positive and Negative Affect Schedule (PANAS). The PANAS scale was used with the permission of the American Psychological Association.

The participants' perceptions of the organisational environment was measured with three scales:

- a perception of the organisation's internal environment measure
- a perception of the organisation's external environment measure
- a measure of competitive strengths and weaknesses

Note that these scales are employed to obtain a *subjective* rating of the organisation's environment. Whether they prove to be an accurate *objective* assessment of this environment is immaterial. What is important is whether they

genuinely reflect the participants' beliefs or perceptions as regards the nature of the organisational environment.

A number of demographic variables were also sampled. These served to both provide differentiation within the sample and enabled a number of potential extraneous variables to be considered in the subsequent analysis.

The research questionnaire can be found in appendix B.

THE PANAS SCALE

There have been a large number of measures of positive and negative affect developed and studied in a variety of research areas. However, the psychometric properties of a number of these scales are open to question. While some mood scales have been developed through factor analysis, some appear to have been developed on an ad hoc basis (Watson et al., 1988). An example of this is Bradburn's widely used PA and NA scales (1969; cited in Watson et al., 1988). This has been found to be unreliable (coefficient $\alpha = .52$ for NA, $.54$ for PA) and only moderately related to measures of the same factor (for NA, the convergent correlations ranged from $.39$ to $.52$; for PA, they ranged from $.41$ to $.53$) (Watson et al., 1988). Because of this some care had to be taken to select a scale that had appropriate characteristics, both in psychometric and practical terms.

With this in mind, the present study employed the Positive and Negative Affect Schedule (PANAS) to capture NA and PA levels. The PANAS is a modern,

well-supported scale that is also brief and easy to administer. The two 10-item PANAS scales were created to provide simple, reliable and valid measures of the two higher order dimensions of self-rated affect. The Positive Affect scale consists of the terms *active, alert, attentive, determined, enthusiastic, excited, inspired, interested, proud, and strong*; the terms comprising negative affect are *afraid, ashamed, distressed, guilty, hostile, irritable, jittery, nervous, scared, and upset*. Respondents rate the extent to which they have experienced each term on a 5-point scale on which 1 = very slightly or not at all, 2 = a little, 3 = moderately, 4 = quite a bit, and 5 = very much. Application and scoring of the PANAS is extremely simple and can be completed by the participant without the need for assistance. The PANAS has been used in a wide variety of populations from adolescents (Crocker, 1997; Huebner & Dew, 1995) to the 'old-old' (Kercher, 1992) as well as in organisational contexts (Munz et al., 1996; Williams et al., 1996).

The PANAS can be used with a variety of time instructions to capture various pictures of trait or state affect, e.g. the present moment, today, the past few days, the past week, the past few weeks, the past year and in general. The present study employed the 'in general' instruction - so as to capture trait (as apposed to state) affect. In developing the PANAS the above time instructions have shown alpha reliabilities that are all acceptably high, ranging from .84 to .87 for NA and from .86 to .90 for PA (Watson et al., 1988). The PANAS alpha reliabilities for the present study are similar at .82 for NA and .88 for PA.

The authors of the PANAS have conducted extensive analysis of the instrument's psychometric properties and have reported solid evidence for its internal and external validity (Watson et al., 1988). Factorial analysis produced appropriate convergent/discriminant patterns amongst the scales. Both scales demonstrated very high correlations ranging from .89 to .95, whereas discriminant correlations were quite low, ranging from -.02 to -.18. Furthermore, factorial analysis of all the items showed that two dimensions accounted for virtually all of the common variance in these solutions (ranging from 84.4% in the 'How do you feel right now' data to 96.1% in the 'general' ratings). Median varimax loadings for the PANAS descriptors have strong primary loadings (.50 and above) on the appropriate factor, and the secondary loadings are all acceptably low. Thus, all of the PANAS items are good markers of their opposing scales (Watson et al., 1988).

THE ORGANISATIONAL ENVIRONMENT MEASURES

Perceived Internal Environmental Uncertainty Measure

A 9-item scale was developed to measure participant's perceptions of the internal organisational environment. It asks respondents to rate aspects of their organisation as on a 7-point, Likert-type scale, the ratings ranging from *major strength* to *major weakness*.

The items used to construct this scale were taken from (Ireland et al., 1987) because of their relevance (in that they were developed with the strategic environment in mind) and because of their robustness (they were empirically

developed and analysed). In this study Ireland et al. presented a number of items to managers that described internal aspects of their organisation. The participant managers then indicated if they found these strength and weakness indicators especially salient. A number of items were found to be statistically significant in terms of differentiation, though the exact items tended to differ with firms and managerial level effects. At least one of the three management levels (i.e. low, middle and high) found the variables selected to make up the internal environment scale significant indicators of strengths or weaknesses (at the $p < .05$ level).

Clarifications have been appended to some of these items to improve understanding of the item. This increased clarity of the items meaning should serve to enhance validity by increasing the likelihood that the respondents all interpreted the item in a similar manner, i.e. the item samples the same general construct with all participants. Reliability for this instrument was good, with a coefficient α of .81.

Post hoc factor analysis was used to examine the structure of the items in the measure. A single component was extracted with eigenvalues in excess of 1.5. The statistical criteria adopted for the factor analyses mirror those employed by Daniels (1998). Using varimax rotation, eight of the nine items loaded on the hypothesised factor at greater than .55. One item loaded poorly, 'The abilities of employees', and was dropped.

Perceived External Environmental Uncertainty Measure

This measure is taken from a study conducted by Oswald et al. (1997). Participants are asked to rate the environment the organisation faces in terms of seven adjective pairs. These were *stable-turbulent*, *simple-complex*, *predictable-unpredictable*, *static-dynamic*, *non-threatening-threatening*, *exciting-dull* (reversed) and *certain-uncertain*. Oswald et al. initially developed nine adjective pairs "...in accordance with information gathered from organization leaders regarding the industry's environment." (1997, p. 352). The authors then subjected these initial adjectives pairs to a principal-axis factor analysis that yielded a one-factor solution on which these seven pairs adequately loaded. The resulting scale was reported to have a coefficient of .66. This is adequate but not exceptionally high. To address this middling reliability figure the Likert scale employed in the measure was expanded from five to seven points for use in the present study. There is evidence that the reliability of a scale item increases with the number of scale points, up to 11 (Nunnally & Bernstein, 1994). This was supported in the present study, with the scale displaying a coefficient α of .81. Scale validity may also be enhanced by this adjustment, as there is more room for finer differentiation to be made by participants, thus enabling a more accurate representation of the participant's perceptions to be captured. This adjustment also aids consistency with the other environment measures.

Factor analysis conducted on this measure using the same criteria as above and found that six of the seven items loaded onto the factor at .50 or better. One weak item, 'How certain or uncertain the environment is', was dropped.

Perceived Competitive Strengths Measure

This measure is also adapted from Oswald et al. (1997). Evaluation of an organisation's competitive strengths is an important aspect of the strategic planning process. The scale consists of five items and participants are asked to rate how their organisation compares to their strongest competitors, with respect to these items. The scale items represent factors noted in the literature as indicators of a firm's viability in the industry. The dimensions were *strategic direction, marketing effectiveness, managerial skills, public image, and leadership*. The authors of the original scale report a coefficient alpha of .65. Once again, the original five-point, Likert-type scale has been replaced with a seven-point scale, and for the same reasons as for the external environment measure. The change is associated with a similarly improved reliability statistic, up to .83

The factor analysis conducted on this scale found that all five items loaded onto the hypothesised factor at .70 or better.

DEMOGRAPHIC VARIABLES

General demographic information gathered included: participant gender, age, organisational tenure, years in present position, management levels below the CEO, organisation size and turnover, the business sector the organisation occupies, participant's job description, and whether their position was internally or externally focused.

PROCEDURE

The present study employed a cross-sectional, correlational design. The correlational paradigm is considered appropriate because the present research is of an exploratory nature. Scientific studies can be grouped into two main activities: the first is exploratory data collection and the second is hypothesis testing. Exploratory data collection occurs when an area of research is new and relatively unexplored. It is focused on such tasks as identifying variable and important relationships between these variables and behaviours (Bordens & Abbott, 1996). This area of research is at such a stage.

Letters inviting participation in the study were sent out to organisations. Each letter explained the purpose of the research, the conditions for participating and included a sample of the questionnaire. The letter requested that, if the organisation wished to participate, they should reply specifying how many questionnaires were required (i.e. how many managers they had willing to participate). Each questionnaire included a cover letter that further explained the nature of the study and made clear that the study was voluntary, as well as explicating the participant's ethical rights (Appendix A). Two options were suggested for questionnaire distribution – they could be distributed through a central nexus within the organisation, or a list of contact details could be provided to the present researcher and the questionnaires sent out individually to participants. The questionnaire was relatively brief and took approximately 10 minutes to fill out. While still sufficient to gather effectively gather all required data, it was hoped this brevity would make the task of completing the

questionnaire less onerous and thus increase the potential return rate. Questionnaires were anonymous and returned via freepost envelopes. All participants had the option of returning a form requesting a summary of the results obtained from the study (Appendix C).

A total of 589 questionnaires were sent out and 150 completed examples were returned, for a response rate of 25.4%. This relatively low response rate was not wholly unexpected – anecdotal evidence gathered before the data sampling process indicated some difficulty might be encountered in gaining participation from the business sector.

Most of the sample was male (63%) and the mean age range was 35-39, the mean organisational tenure was 9.2 years (s.d. = 7.2), the mean tenure in the participants' current position was 5.1 years (s.d. = 4.7), the mean number of management levels from the organisation's Chief Executive Officer was 1.5 (s.d. 1.07), the mean reported organisation size was 249 (range = 1 - 2000), and the mean reported organisational turnover was \$69 148 299 (range = \$80 000 to \$800 000 000).

STATISTICAL ANALYSIS

The data was analysed using the SPSS 9.0 computer statistical analysis package. This package was used to calculate all descriptive statistics, carry out zero-order correlations, first-order correlations, multiple regression analyses, and moderated multiple regression analyses. The demographic variables served as controlled

variables for the hierarchical multiple regression analyses and as predictor variables in the first-order correlations conducted.

RESULTS

The bivariate intercorrelations, means, reliabilities, and standard deviations amongst the independent and dependent measures are shown in Table 1. The correlations provide support for hypothesis one (that PA is related to perceptions of the organisational environment), but not for hypothesis two (that NA is related to perceptions of the organisational environment). The most salient information in Table 1 is contained in the first two correlation columns. These show the relationship between the independent variables (positive affectivity, negative affectivity) and the dependent variables (perceived internal environmental uncertainty, perceived external environmental uncertainty, perceived competitive strengths and weaknesses). The magnitude of the correlations between positive affect (PA) and the dependent variables (DVs) are much greater (from .16 -> .38) than the DVs and Negative Affectivity (NA). Thus, in the case of PA the correlations range from weak to moderate, while with NA they are fairly weak.

Table 1

Bivariate Correlations, Means, Standard Deviation and Reliabilities

Measure	Mean	SD	1	2	3	4	5
1 Positive Affectivity (N = 150)	3.72	.56	.88				
2 Negative Affectivity (N = 150)	1.46	.41	-.15*	.82			
3 Perceived Internal Environmental Uncertainty (N = 150)	5.02	.85	.34***	-.12	.81		
4 Perceived External Environmental Uncertainty (N = 150)	4.60	.99	.16*	-.05	.25**	.81	
5 Perceived Competitive Strengths (N = 147)	4.82	1.05	.39***	-.11	.75***	.23**	.83

*p < .05 **p < .01 ***p < .001. Alpha values lie on the diagonals

PA showed significant, positive relationships with Perceived Internal Environmental Uncertainty ($r = .34, p < .001$), Perceived External Environmental Uncertainty ($r = .16, p = .025$) and Perceived Competitive Strengths ($r = .39, p < .001$). NA failed to show a significant relationship with any of the DVs.

There is a low but significant negative correlation between the two affect variables ($r = -.15, p = .03$). The inter-scale correlations and reliability statistics for the PANAS measure appear to follow a fairly typical pattern. This NA-PA relationship is of a very similar level to that reported by (Watson et al., 1988) when presenting development and validation data for the PANAS. In this study a PA-NA correlation for the 'general' time condition of $-.17$ was found. Reliabilities for the present study also compare favourably with the Watson et al. (1988) data (Cronbach's coefficient alpha in their study = $.88$ for PA, $.87$ for NA, as compared with $.88$ and $.82$ respectively for the present study).

All the DVs (internal environmental perceptions, external environmental perceptions and competitive strengths and weaknesses) intercorrelate at $p < .01$. Moreover, the correlation between the internal environment and competitive strength measures ($r = .75, p < .001$) is much larger than any of the relationships between the IVs and the DVs. This could mean that the DVs are interacting to confound the results.

The bivariate correlations then provide support for the hypothesis that PA impacts upon perceptions of the organisational environment. The results suggest that as an individual's positive affectivity increases their perceptions of the

internal ($r = .34, p < .001$) and external environment ($r = .16, p = .025$) and of the ability of their organisation to compete effectively in the marketplace ($r = .39, p < .001$) is enhanced in a systematic fashion. No support is provided for the hypothesis that NA affects perceptions of the organisational environment, as none of the IVs achieved the .05 significance threshold.

Simple bivariate correlations are limited in that they provide no clue as to the direction of a relationship and they cannot indicate the potential effects that other variables are having on a particular relationship. To further examine the relationships between the DVs and IVs, while controlling for potential confounding due to extraneous variables, six hierarchical multiple regression analyses were conducted. The sample of demographic variables taken was entered on step 1. The following variables were controlled for in the regression equation: age, gender, organisational tenure, tenure in current position, management levels below that of the organisation's Chief Executive Officer (or equivalent), the size of the organisation (measured by the number of people employed), the organisation's annual turnover (NZ\$), the focus of the respondent's work and the industry sector the organisation occupies. Management function was coded as internally focused (e.g. production, coded as 0) or externally oriented (e.g. sales, marketing, coded as 1). The industrial sectors chosen were the services, manufacturing, and public sectors. These sectors represented all the main industries in the sample. Since voluntary-sector managers were always coded as zero for all three industrial sector dummy variables, they are implicitly included in the coding procedure. The service sector included managers from retailing or wholesaling, research and development

organisations, leisure services, professional services and financial services. The public sector included managers from both public sector and utility organisations. The results of these MRAs are presented in Table 2.

The multiple R figures for these MRAs are all reasonably strong (from .375 -> .479 for internal environment, .517 -> .534 for external environment and from .440 -> .557 for the competitive strengths measure; Table 2). The demographic variables account for from 5.3% to 19.3% of the explained variance.

In two out of three cases the ANOVA conducted on the demographic variables entered at step one demonstrated that the impact of the demographic variables was statistically significant ($p < .001$ for external environment; $p = .015$ for competitive strengths).

The introduction of NA in step two failed to produce any significant changes in the significance levels. Thus, the null hypothesis cannot be rejected in this case.

The introduction of PA on step two resulted in significant changes in R^2 level with two of the three dependent variables (Table 2). The internal environmental uncertainty MRA displayed a .089 change in R^2 ($p = .001$), while the competitive strengths measure increased by .122 ($p < .001$). Thus, the introduction of positive affectivity boosted the percentage of the range of variance explained for these two measures to 14.2% and 23.1%.

Table 2

Six hierarchical Multiple Regression Analysis with the Affectivity (Positive or Negative) entered on Step Two

Predictor	Perceived Internal Environmental Uncertainty		Perceived External Environmental Uncertainty		Perceived Competitive Strengths and Weaknesses	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
With Negative Affectivity introduced						
Gender	.07	.08	-.13	-.14	.00	.01
Age	.09	.10	.06	.05	.13	.13
Organizational Tenure	.14	.13	.02	.02	.12	.11
Tenure in Current Position	-.24*	-.25**	-.36***	-.35***	-.40***	-.40***
Level from CEO	-.02	-.00	-.24**	-.26**	-.16	-.15
Turnover	.05	.05	-.08	-.07**	.03	.02
Organizational Size	.01	.01	.24**	.23	.12	.12
External Functional Orientation	.14	.16	.04	.01	.19	.20*
Manufacturing Sector	.03	.03	-.01	-.02	-.02	-.01
Public Sector	-.27	-.25	-.65	-.68**	-.24	-.23
Services Sector	.02	.03	-.44	-.46	-.11	-.10
Negative Affectivity		.08		-.11		.05
R	.375	.383	.517	.527	.440	.443
R ²	.141	.147	.268	.277	.194	.196
Adjusted R ²	.053	.051	.193***	.196***	.109**	.104**
R ² Change		-.002		.003		-.003
With Positive Affectivity introduced						
Gender	.07	.08	-.13	-.13	.00	.01
Age	.09	.02	.06	.02	.13	.05
Organizational Tenure	.14	.15	.02	.02	.12	.13
Tenure in Current Position	-.24*	-.16	-.36***	-.32***	-.40***	-.31***
Level from CEO	-.02	-.02	-.24**	-.24**	-.16	-.17
Turnover	.05	.06	-.08	-.08**	.03	.03
Organizational Size	.01	.03	.24**	.24	.12	.15
External Functional Orientation	.14	.11	.04	.03	.19	.16*
Manufacturing Sector	.03	.09	-.01	.02	-.02	.06
Public Sector	-.27	-.19	-.65	-.62	-.24	-.15
Services Sector	.02	.04	-.44	-.43	-.11	-.08
Positive Affectivity		.33***		.14		.37***
R	.375	.479	.517	.534	.440	.557
R ²	.141	.229	.268	.285	.194	.311
Adjusted R ²	.053	.142***	.193***	.205***	.109**	.231***
R ² Change		.089***		.012		.122***

*p < .05 **p < .01 ***p < .001

These results are not wholly consistent with the relationships found in the bivariate correlation table (Table 1). For example, even though none of the DVs showed a significant relationship with NA, two of the three were not far off significance (internal Environment -> NA: $r = -.12$, $p = .066$; competitive

strengths: $r = -.11, p > .087$). Thus the correlations indicate a general trend toward significance. However, the R^2 change for NA in each of the three MRAs it was entered in is extremely close to zero - a much weaker effect than suggested in Table 1. Likewise, PA, which correlated at significant levels with all three DVs, only had a significant impact on the perceived internal environment measure and the perceived competitive strengths and weaknesses measure. This may indicate that affect is working through some other variable(s) to influence perceptions of the internal and external environments and the organisation's competitive strengths and weaknesses and the results are being confounded.

The beta values produced by the MRA present the magnitude of the impact, or rate of change, of the IV on the DV. The beta values for the impact of NA range from $-.11$ to $.082$. These are not only very small but are also inconsistent in direction. In fact, the R^2 change and impact statistics for negative affectivity are, for the most part, effectively indistinguishable from zero. The impact of PA on the DVs is much greater however, ranging from $.14$ to $.37$. The beta statistics for internal environment ($.33, p = .001$) and competitive strengths and weaknesses ($.37, p < .001$) proved to be significant. Thus, as suggested by the correlation coefficients, increasing levels of Positive Affectivity is consistent with a more positive perception of the internal environment and competitive strengths of the individual's organisation. But a number of the direct relationships suggested by the bivariate correlations have proved to be spurious or possibly are a product of one of the affective states impacting on a third variable that has a true, direct relationship with the DV.

Table 3

Moderated Multiple Regression Analysis of potential interaction effects between negative and positive affectivity

Predictors	Perceived Internal Environmental Uncertainty			Perceived External Environmental Uncertain			Perceived Competitive Strengths and Weaknesses		
	Beta	R ² _{adjusted}	R ² Δ	Beta	R ² _{adjusted}	R ² Δ	Beta	R ² _{adjusted}	R ² Δ
Step 1		.107***	.107***		.013	.013		.146***	.146***
Positive Affect	.33***			.16			.39***		
Negative Affect	-.07			-.03			-.06		
Step 2		.126***	.019*		.013	.000		.144***	-.002
Positive Affect	-.23			.44			.17		
Negative Affect	-1.09*			.49			-.45		
Positive Affect x Negative Affect	1.09*			-.55			.42		

*p < .05 **p < .01 ***p < .001

As noted the two IVs, NA and PA, correlated significantly with each other ($r = -.15$, $p = .03$). Though this correlation achieves significance it is still quite low. An examination of the tolerance statistic for the MRAs conducted suggests that collinearity is not an issue (tolerance statistics range from .85 to .88, which are all acceptably high). This may mean that they are interacting to confound the results. Furthermore, the theoretical literature notes that the two affective states may work in concert to produce specific mood states. For example, low-PA and high-NA produce depression, while high-NA without the PA component produces anxiety. These specific mood states may result in a biasing of perceptual processes that produces an impression of the environment that is unique to each individual, i.e. anxiety biases environmental scanning while depression biases recall. To investigate the possibility of interaction effects associated with the affective states, moderated regression analyses were conducted. The results of these are presented in Table 3.

The hypothesis received partial support in that the interaction of positive and negative affect added significantly to the variance explained for perceived internal environmental uncertainty ($p = .043$). The interaction of positive and negative affect did not add significantly to the variance explained for external environmental perceptions or perceptions of the organisations competitive strengths and weaknesses.

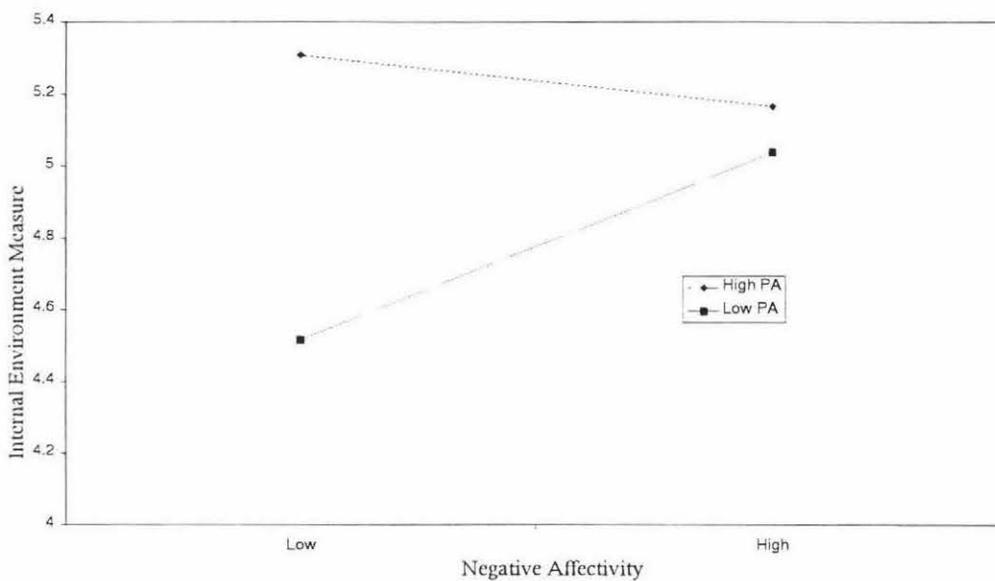


Figure 2. Schematic representation of the positive x negative affect interaction in the prediction of perceptions of internal environmental uncertainty

To derive the data in Figure 2 a median split on the positive and negative affect measures was conducted. Figure 2 illustrates that affect impacts negatively on perceptions of the organisation's internal environment when both affective states are low. When either of the affects is high individuals' perceptions of the internal environment do not differ significantly, regardless of the level of the other affect state. However, when both affect states are low, the internal environment is evaluated as significantly worse.

Table 4

Correlations, Partial Correlations, and Variance Reduction Rates

Relationship	Zero-order Correlations	Partial Correlations (controlling for)		Variance Reduction Rate	
		NA	PA	NA	PA
Sex - Internal	.09	.03	.03	-	-
Age - Internal	-.01	.02	-.01	-	-
Tenure - Internal	-.09	-.09	-.02	-	-
Tenure in Present Position - Internal	-.12	-.15*	-.09	-	-
Levels below CEO - Internal	-.06	-.09	-.06	-	-
Organisational Size - Internal	-.05	-.04	-.00	-	-
Turnover - Internal	-.01	.05	.07	-	-
Manufacturing Sector? - Internal	-.02	.06	.12	-	-
Public Sector - Internal	-.27**	-.26**	-.21*	.07	.40
Service Sector - Internal	.27**	.23**	.17*	.27	.60
External Orientation? - Internal	.21**	.25**	.19*	-	.18
Sex - External	-.09	-.11	-.10	-	-
Age - External	.01	-.00	-.02	-	-
Tenure - External	-.20**	-.15	-.13	.44	.58
Tenure in Present Position - External	-.22**	-.21*	-.19*	.09	.25
Levels below CEO - External	-.19**	-.25**	-.22**	-	-
Organisational Size - External	.05	.00	.03	-	-
Turnover - External	-.02	-.05	-.04	-	-
Manufacturing Sector? - External	.21**	-.18*	.21*	.26	-
Public Sector - External	-.25**	-.28**	.25**	-	-
Service Sector - External	.15*	.17*	.13	-	.25
External Orientation? - External	.12	.09	.07	-	-
Sex - Competitive Strengths	.08	.03	.02	-	-
Age - Competitive Strengths	-.00	.02	-.02	-	-
Tenure - Competitive Strengths	-.11	-.12	-.06	-	-
Tenure in Present Position - Competitive Strengths	-.26**	-.28**	-.23**	-	.22
Levels below CEO - Competitive Strengths	-.09	-.13*	-.09	-	-
Organisational Size - Competitive Strengths	.01	-.00	.06	-	-
Tenure - Competitive Strengths	.01	-.04	.06	-	-
Manufacturing Sector? - Competitive Strengths	-.03	.04	.11	-	-
Public Sector - Competitive Strengths	-.16*	-.16*	-.10	-	.61
Service Sector - Competitive Strengths	.16*	.13	.05	.34	.90
External Orientation? - Competitive Strengths	.29***	.26**	.21*	.20	.48

*p < .05 ** p < .01 *** p < .001

To test hypothesis four, that affect works to produce biased estimates of relationships between substantive organisational variables, first-order correlations were employed to partial out the effects of affect. Table four presents zero-order correlations between the demographic variables and the dependent measures, the correlations controlling for NA and PA, together with the Variance Reduction Rates (VRRs). The VRR is calculated as the squared zero-order correlations (between the predictor and the criterion) minus the squared first-order correlation

(controlling for either NA or PA), with this difference divided by the squared zero-order correlation (Chen & Spector, 1991). The VRR then, represents the proportion of shared variance between the independent and dependent variables attributable to NA.

It is impossible to make a definitive statement as to the impact of affect upon the predictor -> criterion relationship as there is no statistical test for comparing these types of coefficients (Williams et al., 1996). Furthermore, the VRR test is sensitive to context, i.e. the magnitude of the differences between the zero-order and the first-order correlations depends on the magnitude of the first-order correlations one begins with.

The conclusions drawn from Table four must be qualified and constrained by these methodological limitations. However, inferences can be made from the broad pattern of results observed. Of the 13 significant zero-order correlations observed, the predictor and criterion variable shared variance with the method effect variable of PA in 10 of these 13 cases. VRRs ranged from .19 to .90, with the mean VRR being .44. The findings for NA are less clear with only seven of these thirteen relationships displaying shared variance with the method effect variable. VRRs ranged from .07 to .44, with a mean of .24.

This analysis provides support for PAs ability to act as a method effect variable in an organisational context, as well as somewhat weaker evidence for NAs ability to act this way. Several of the variance reduction rates are quite large. However,

in most cases the differences between the zero-order and corresponding partial correlations was somewhat small.

The results obtained provide good support for hypothesis one; that PA will systematically impact on perceptions of the organisational environment. Both the correlational and regression analysis found strong evidence for the existence of a main effect between PA and perceptions of the internal and external environments and the organisation's competitive strengths and weaknesses. However, no support was found for hypothesis two; that NA will systematically impact on perceptions of the organisational environment. Some support was found for hypothesis three; that PA and NA will interact to bias perceptions of the organisational environment. Evidence was also found that supported hypothesis four, that NA and PA may share variance with organisational variables and thus inflate the zero-order correlations between these variables. However, no definite conclusion can be reached in terms of the level of support for this hypothesis, as there are no statistical tests to determine levels of significance between zero- and first-order correlations.

DISCUSSION

The purpose of the present study was to test for the existence of a relationship between trait affect (negative and positive) and managers' perceptions of their organisational environments. Previous research has discovered a relationship between negative affect and perceptions of aspects of the environment germane to strategic decision-making (Daniels, 1998).

The present research contributed to the debate on the issue of the role of negative affectivity in the organisation and opened up a new line of enquiry in terms of the potential role of positive affectivity in the strategic decision-making process. Using a cross-sectional, correlational design the present research replicated and extended this line of research by employing positive as well as negative affect. The hypothesis that positive affectivity could influence perceptions of the organisational environment was supported. Correlational and multiple regression analysis found a systematic relationship in the hypothesised direction between PA and the dependent measures (perceived internal environmental uncertainty, perceived external environmental uncertainty, perceived competitive strengths and weaknesses). PA was also revealed to share variance with the dependent measures and a number of organisational variables, raising the possibility of PA operating as a method effect variable and thus systematically biasing reported relationships between substantive organisational variables and perceptions of the environment.

Contrary to the findings of Daniels (1998), no support was found for the hypothesis that negative affectivity had a relationship with the dependent variables. Some evidence was found for NA sharing variance between the dependent measures and organisational variables, but these relationships were intermittent and generally minor. This cannot then be taken as sufficient evidence for the hypothesis to be considered supported. The hypothesis that negative and positive affectivity may interact (thus producing specific mood states) and affect perceptions of the environment received minor support, with a significant interaction effect being revealed for the perceived internal environmental uncertainty measure ($R^2\Delta = .019, p < .05$).

INTERPRETATION OF THE FINDINGS

The analysis has shown that there is a relationship between PA and aspects of the organisational environment that is systematic and not a product of chance. Furthermore, PA still showed significant relationships with the internal environment and competitive strengths DVs even when the effects of a number of organisational variables were controlled for. The conclusion is that there is a definite main effect evident for PA as regards perceptions of the organisation's internal environment ($R^2\Delta = .089, p. < .001$) and the perceived competitive strengths and weaknesses of the organisation ($R^2\Delta = .122, p. < .001$). Furthermore, the percentage of the variance PA accounted for in these two models (8.9% for the internal environment measure 12.2% respectively for the competitive strengths measure respectively) is quite substantive for a variable hypothesised to merely colour perceptions by impacting on cognition. Previous

research regarding other aspects of the organisation has supported the contention that PA has a role to play in shaping the perceptions of organisational members. For example, Munz et al. (1996) reported that PA had weak measurement and substantive relationships with aspects of the organisation and characteristics of participants' jobs.

This result suggests that managers with heightened PA levels will view the internal organisational environment and the competitive strengths of their organisation more favourably. This then logically leads to the conclusion that subsequent strategic-level decisions made by high-PA managers will differ from those managers with low-PA. Just as a military commander may order the army to advance if he or she sees the terrain ahead as favourable, so may the strategic planner send the organisation in a certain direction if he or she perceives the 'competitive terrain' ahead as being of a favourable nature. The relationship uncovered by the present analysis shows that the feelings associated with heightened PA are being projected onto the organisational environment, in a process at odds with the kind of rational, objective analysis anticipated by traditional strategic planning paradigms (c.f. Porter, 1980).

Objectively, the affect -> perception relationship may manifest itself in differing forms dependent on the specific emotion(s) that are being experienced. Specific emotional states within the positive affect category may produce specific responses to the enhanced perception of the environment's beneficent nature. This is because specific emotions serve to impose specific modes of cognitive functioning on an individual (Oatley & Johnson-Laird, 1987). In general,

individuals high in positive affectivity are joyful, enthusiastic and optimistic about the future (Clark & Watson, 1991) and positive affectivity has been associated with greater creativity (Estrada, Isen, & Young, 1994).

Research evidence suggests that heightened PA is generally constructive (Clark & Watson, 1991). However, the effects of PA can also be counter-intuitive. Recalling the earlier discussion of affect and risk-taking behaviour in gambling contexts, it is apparent that PA does not necessarily lead to more optimistic/positive behaviours as one might expect. Rather, there appears to be a change of focus from probabilities to one focusing on utilities or outcome values, especially for losses (Nygren et al., 1996; Arkes et al., 1988; Isen & Geva, 1987). Further, the context/environment in which the decisions are made influence the decision-maker. Evidence suggests that high-PA individuals are more risk-averse when considering risky options when the ramifications of the decision are temporally distant (Williams & Voon, 1999). The last point is significant as regards strategic management - the results of strategic decisions are invariably temporally distant from the decision-maker(s). (Williams & Voon, 1999) findings combined with the findings of the present study would lead to the conclusion that the 'riskiness' of the decision strategic managers make are moderated by their levels of PA.

In contrast, the hypothesis that negative affectivity could also influence managerial perceptions was not supported in the present study. No significant correlational relationships were found with any of the three DV measures. Likewise, the regression analysis produced no systematic association between

negative affect and the DVs. The NA data are inconsistent with previous research on NA and perceptions of the organisational environment (e.g. Daniels, 1998) as well as the well-established pattern of NA effects reported in the literature (e.g. Watson & Clark, 1984; Levin & Stokes, 1989; MacLeod, 1991; Matt et al., 1992; Ruiz-Caballero & Gonzalez, 1994). Daniels (1998) found significant relationships between NA and four aspects of the organisational environment considered germane to strategic decision-making (Perceived organisational performance, industry growth, industry complexity and industry competitiveness). The regression analyses of the present study and the Daniels (1998) study are comparable because the organisational variables controlled for are essentially the same. The R^2 change statistics in the Daniels study indicate that NA accounts for 2% of the variance in the model. While statistically significant this figure is very low. It would not have required a much weaker marker of NA to be sampled before the results returned a non-significant finding. Thus, even though the present study returned a non-significant finding there is still potential for the NA -> environmental perception links to exist.

It can also be noted that while there are no significant results for NA in the correlation matrix (Table 1), the signs for the correlations are all in the hypothesised direction (i.e. negative) and two of the three relationships (NA -> internal environmental uncertainty and NA -> perceived competitive strengths) approach the .05 significance threshold ($p = .066$ and $.087$ respectively). Thus, there is a trend towards significance in the hypothesised direction for NA. This suggestion is supported by the comparison of the Pearson's r figures obtained for NA in the present study with those obtained by Daniels (1998). Table 5 presents

the results of between groups t-tests conducted on the dependent variables of the presents study and the dependent variables of the Daniels study. It should be noted that the last two Daniels measures (perceived industry complexity and perceived industry competitiveness) are reversed in meaning to those of the present study's DVs as well as the first two Daniels measures (i.e. confirmation of the theoretically expected NA → DV relationship is shown by a positive correlation rather than a negative one as with the other measures). Their direction was thus reversed for the purposes of this analysis. This comparison revealed that there is no significant difference in the r figures for the DVs of the present study and the Daniels DVs (perceived organisational performance, perceived industry growth). The t-tests show that, factoring in the relative sample sizes of these two studies, there is no significant difference between the strengths of the correlations reported.

Table 5

Independent (two sample) t-test for NA→DV correlations from present study and Daniels (1998)

Present study dependent measures	Perceived Organisational Performance ($r = -.20$, $p < .01$, $n = 272$)	Daniels (1998) dependent measures		
		Perceived Industry Growth ($r = -.09$, $p < .10$, $n = 272$)	Perceived Industry Complexity ($r = .11$, $p < .05$, $n = 272$)	Perceived Industry Competitiveness ($r = .11$, $p < .05$, $n = 272$)
Perceived Internal Environmental Uncertainty ($r = -.12$, $n = 150$)	-1.01	-.33	.10	.10
Perceived External Environmental Uncertainty ($r = -.05$, $n = 150$)	1.47	.07	.59	.59
Perceived Competitive Strengths ($r = -.11$, $n = 147$)	.37	-.23	0	0

Evidence was found for the potential for affect to share variance with variables in an organisation and bias relationships between substantive organisational variables (Table four). In the present analysis PA was shown to be responsible for shared variance in 10 of the 13 systematic relationships present. As with previous analyses, NA displayed a similarly weak effect relative to PA and was responsible for shared variance in only half the systematic predictor-criterion relationships present. PA though would appear to have a role to play as a method effect variable in addition to the main effects noted. In several of the relationships the VRRs proved to be quite substantial.

Due to the nature of the data in Table four it cannot be definitively determined whether affectivity is operating as a method effect variable between the predictor and the criterion variable or whether it instead act merely as a measurement contaminant. Potential avenues for measurement contamination include nonmethod bias (Schmitt, 1994), item context effects (Harrison, 1993), test administration context effects (Council, 1993), and dispositional nuisance personality variables (Burke et al., 1993). However, a number of studies have concluded through empirical research and theoretical argument, that affect does have method affect properties (Brief et al., 1988; Burke et al., 1993). Further, studies employing latent variable structural equation approaches have found evidence for NA and PA's relationships with substantive organisational variables (Williams et al., 1996; Munz et al., 1996). Thus, it is most likely that affect does have a genuine relationship with the variable of interest.

The results of the moderated regression analysis raise the possibility that the impact of affect may be more complex and subtle than these tests for a main effect can show. The moderated MRA found that the interaction of positive and negative affect added significantly to the variance explained for the internal environmental uncertainty measure. This supports the notion that the two general affect states interact to produce specific mood states that bias perceptions in a certain direction/manner. Figure 2 revealed that when both affect states were low the internal environment was evaluated as much worse than with any of the other three conditions. Having both affect states low would be indicative of feeling 'flat' or unemotional and it is intuitively apparent how this might result in less positive evaluations of the environment. However, the theoretical literature indicates that high-NA would be the chief indicator of negative evaluations of the environment (Raghunathan & Pham, 1999). As discussed, high-NA produces anxiety which research has found to bias environmental scanning, while depression has a high-NA and a low-PA component and evidence suggests that depression then biases recall processes (Mogg, Mathews, Bird, & MacGregor-Morris, 1990; Dalgleish & Watts, 1990). Figure 2 however, suggests that the NA component has relatively little impact on perceptions of the internal environment. Rather, what is the determining factor in perceptions of the environment is the presence or absence of positive affectivity. Though there was an interaction, it would appear that it was not of the nature one would expect from the theoretical literature. The hypothesis that anxiety and depression bias information processing is supported by Figure 2. High-NA, low-PA produces the second to worst evaluations of the organisational environment present in Figure 2. However, it was expected that strong negative emotionality would be the more

significant element of the two affective states. The results suggest that it is positive affectivity levels that are primarily responsible for changing evaluations of the environment.

This could be interpreted as evidence that the information biasing effects associated with the negative mood states is a relatively weak phenomenon. However, two caveats must be borne in mind when evaluating this analysis. One is that the NA x PA interaction accounted for a significant amount of variance with only one of the three DVs (perceived internal environmental uncertainty). A non-significant interaction effect might be expected with the external environment measure, which has shown consistently weaker relationships with the affect measures relative to the other DVs in all the correlational and regression analyses. The perceived competitive strengths measure on the other hand, has consistently displayed similar effect sizes as the internal environment measure and correlates with that instrument at .75. The finding of no PA x NA interaction effects for the internal environment measure but not the competitive strengths measure is not consistent with previous data patterns; this raises the possibility that this pattern is a fluke result that will prove difficult to replicate or that there may be extraneous variables impacting on the relationship under analysis.

Furthermore, while the NA x PA interaction effect with the internal environment measure is systematic (as evidenced by the p value of .043) the actual amount of variance in the model this effect explains is very small (1.9%). Thus, in terms of contributing to the understanding of the model, this interaction effect contributes only a small amount of explained variance to the total model.

As an overall observation, it should be noted that PA produced much stronger effects than NA. This pattern was largely consistent throughout the analysis. This is not unusual however, in light of previous research findings. For example Agho, Price, & Mueller (1992), when validating the discriminant validity of the constructs of job satisfaction, positive affectivity and negative affectivity, found a similar pattern of relationship strengths. That is, PA was much stronger than NA. George (1989) found positive affectivity was significantly and negatively related to absenteeism while negative affectivity failed to achieve significance. And finally, a similar pattern has been reported when finding evidence for a link between positive and negative emotionality and job satisfaction (Watson & Slack, 1993; Clark & Watson, 1991).

It may then be that it is a typical condition for PA to exert a stronger influence in an organisational context than NA. The theoretical literature suggests that situational factors may exert a greater influence on positive affect, whereas internal factors have a greater effect on negative affect (Diener & Larsen, 1984; Lawton, 1984). Furthermore, Clark & Watson (1991) found that positive affect was more highly associated with a variety of daily events (e.g. social desirability) than negative affect. Events such as social activity may be particularly relevant for positive mood at work given the social nature of many jobs.

The research design employed by the present study does not directly examine the nature of the casual relationships between the variables under investigation. It is possible then that the relationships detected are a product of extant objective

environmental conditions influencing the individual's affective state. That is, environmental factors shape the individuals. Or the relationship could be a product of objective environmental conditions attracting managers of a similarly valenced trait affect. Thus, a systematic relationship exists but neither the environment nor the individual's affectivity act upon each other. However, a number of studies may be cited that render these explanations less likely. For example, Spector & O'Connell (1994) found that NA levels in graduating U.S. college seniors correlated with a range of job stressors (autonomy, role ambiguity, role conflict, workload, constraints and interpersonal conflict). Evidence for a strong underlying genetic basis for affect argues for its resistance to manipulation by external forces. Approximately 40% of the variance in PA and 55% of the variance in NA is attributable to genetic factors (Tellegen et al., 1988). The present study employed trait measures of affect to control for this possible reciprocal causation. Daniels & Guppy (1997) also found evidence that levels of reported affect impacted on perceptions of aspects of the job for people in the same workplace over time, thus disputing the notion that affect does not impact on environmental perceptions.

PLACING THE FINDINGS IN A CONTEXT

The present study is part of the wider work being conducted on strategic management processes and adds to the limited research available on the emotional aspects of this process. The study was intended as both a replication of existing findings and a logical extension of this work.

The results failed to replicate the results Daniels (1998) obtained for a NA -> environmental perceptions relationship, which found moderate evidence for the hypothesised NA -> environmental perceptions relationship. The Daniels study formed the conceptual foundation for the development of the present study. Some similarity was evidenced between the bivariate correlation strengths of the Daniels study and the present study, even though the relationships of the present study did not achieve significance with the smaller sample size obtained. It should also be noted that, while Daniels (1998) found significant effects for NA in his regression analyses and the present study did not in a similar analysis, the percentage of variance accounted for by NA in the Daniels study was very low (NA accounted for from 1% to 2% of the variance explained in the model). Thus, it is not altogether surprising that the reliable reproduction of such a small facet of the theoretical model is problematic.

The replication aspect of the present study has added value in that it is a cross-cultural (i.e. United Kingdom and New Zealand) replication. Even though the replication produced a negative result, the information this 'failure' provides still has worth. That is, the failure to reproduce a phenomenon can be as illuminating as a successful reproduction. Daniels' (1998) results found that NA had a minor impact (R^2 statistics ranged from .01 to .02) but their effects were systematic (i.e. statistically significant). However, the present study found these relationships (using a sample drawn from a differing culture and employing differing dependent measures) to be even weaker and thus non-significant. This result not only suggests the need for further research in this area but also suggests the need to examine the role that cultural differences may play in these relationships. For

example, are New Zealand managers or work places simply more optimistic on average than their UK counterparts, and thus is the latitude for NA to operate more restricted?

One explanation for the difference between the results of the two studies may be that it is an artefact created by differences in the demographic make-up of the respective samples obtained. 21.6% of Daniels' (1998) sample was drawn from the manufacturing sector and 5.6% were from the voluntary sector. These sectors were poorly represented in the present study (4.7% in total). If the present study had obtained a broader sample of the industry sectors, specific industry affective characteristics might have been sampled that were present in the Daniels study, but absent in the present study. Also, as previously alluded to, the sample might differ along unanticipated cultural lines, as the Daniels' sample are UK managers, while the present studies participants are New Zealand managers.

The results of the present study then show a marked divide between the impacts of the two affective states. They are far from equal contributors to the biasing perceptual processes. Overall PA provided good support for its potential to operate as an influence upon perceptions in the organisational context. While there is no research that examines the role of PA in this particular context, this result is consistent with related theoretical literature on such organisational variables as job satisfaction and work stress strain relationships (Brief et al., 1988; McCrae & Costa, 1991; Clark & Watson, 1991). Perceptions of the organisational environment are implicit in these relationships and thus they are conceptually relevant to the present study.

NA on the other hand, largely contradicted previous research in the area (i.e. Daniels, 1998; which this aspect of the present study was intended to replicate). The NA -> perceptions of the organisational environment relationship hypothesis received very little support. However, there was some weak evidence for interaction effects between NA and PA. Specifically, a NA x PA interaction term was revealed in relationship to perceptions of the internal environment. Furthermore, Table 4 did display some evidence for NA effects in terms of sharing variance with organisational variables and the environmental perception measures. Though these effects are sporadic, relatively minor and there is no statistical test to determine if these relationships were significant. Thus, even this limited evidence for NA effects must be viewed with caution.

The present study has extended the affect in strategic management literature to include the potential for PA as well as NA to have an impact on individuals' perceptions and thus decision-making. These results are tentative and exploratory but they open up new possibilities in the literature for further investigation using more tightly focused research questions. The present study has also contributed to the general debate regarding the role of NA in the organisation and has added a non-significant finding to the mixed conclusions that the literature has produced.

IMPLICATIONS OF THE FINDINGS

The results obtained then would imply that PA has a considerably greater role to play within the organisation than NA. According to these findings, it would appear that levels of PA dictate perceptions of the organisational environment and NA has, at best, a much lesser role to play. Future research may conclusively determine the role of NA in this context but the overall pattern of results obtained in the present study (*vis-à-vis* the relative effect strengths of the two affect variables) has been replicated in several other pieces of research on related issues (George, 1989; Agho et al., 1992). A theoretical explanation for this phenomenon has been noted, i.e. the association of PA levels with daily (social) events and NA with internal factors.

The analysis has also revealed the potential for affect to operate in a number of ways. Main effects (Tables 1 and 2), and interaction effects (Table 3) have been noted, as well as confounding relationships (Table 4). This highlights the complexity of the impact of affect and suggests that positive affect may be a very pervasive influence throughout the strategic decision-making process.

While these results do not isolate the causal mechanism(s) involved in the affect - > perception relationship, they nevertheless should be noted and their implications considered by those involved both with strategic management research and those involved with strategic management processes proper. It is becoming increasingly apparent that it is counter-productive to continue to ignore or de-emphasise the place of affect in strategic management. Clearly the present research cannot give concrete recommendations as to how to integrate and compensate for the role of emotions into the practises of strategic planners.

However, as future research uncovers more on the mechanics of the processes involved it is likely that recommendations will be developed and become integrated into suggested practises for future strategic planners.

LIMITATIONS OF THE STUDY

As noted, the present study is limited by the research design selected - that of a cross-sectional, correlational paradigm. This paradigm suited the exploratory nature of the work and was required for a valid replication of the Daniels (1998) study. However, the correlational design is hampered by its inability to assign causality to any relationships revealed.

The present study employed a questionnaire mail out that stressed the voluntary nature of participation. This raises the issues of self-selection as a confounding factor. That is, it seems intuitively plausible that the people most likely to return the survey would be people high in PA, bearing in mind such evidence as the link between PA and acts of pro-social behaviour (George, 1991). This might explain why the NA effects were weak relative to Daniels (1998) - if only a few high-NA people relative to the total sample returned the questionnaire then their impact would have been diluted and thus it would be difficult to detect a systematic relationship.

The present research has demonstrated that a systematic relationship exists between PA and aspects of the organisational environment. From this however, one can only conduct logical speculation as to the direction of this relationship,

based on and extrapolating from the findings in the related theoretical literature. The cross-sectional nature of the research also carries constraints in that it is like a snapshot - it essentially captures a moment in time. Unique events or stimuli could be operating at that time that produce biased estimates of relationships between the variables of interest. Longitudinal studies have a better opportunity to map the fluctuations in relationships that may occur naturally across time as well as potentially gaining greater insight into causal procedures.

A number of issues regarding the measures employed in the present study need to be addressed. The study addressed the question of affect in organisations and employed the PANAS scale to measure affect in this context. While the PANAS is a valid, reliable and well-normed instrument (Watson et al., 1988) and has been employed in a number of organisational studies (e.g. Munz et al., 1996; Williams et al., 1996) it is not specifically designed for use in an organisational context. There is evidence to suggest that emotion in organisations may follow unique patterns relative to those that one might expect see in, for example, an informal social context. That is, most organisational contexts encourage the suppression of displays of emotion and the emphasis of positively valenced emotion, sometimes even enforcing this with explicit organisational rules and norms (Hochschild, 1983). A number of the PANAS NA items are descriptors of fairly strong negative emotions, e.g. 'scared', 'hostile', 'ashamed', 'afraid', and 'guilty'. Organisational members used to operating within the boundaries of their organisations emotional norms may not associate strong negative emotions such as the above items with the work context (Hearn & Parkin, 1987). Organisational members may see these descriptors as emotions one has outside the work context

and individuals may thus have difficulty recalling instances of their having felt this way at work. To control for this potential issue the present study could have employed an affect measure that has been specifically constructed for the organisational context. Another option is to sample specific mood states, within each affective group, rather than taking a broad affect sample. Specialist mood measures might enable greater variance to be sampled (Daniels, 1999).

The dependent measures also presented concerns. All the DVs (perceived internal environmental uncertainty, perceived external environmental uncertainty, perceived competitive strengths and weaknesses) intercorrelated significantly, but the moderate strengths of the relationship between the external environment measure and the internal environment measure ($r = .25$, $p < .01$), and the relationships between the external environment measure and the competitive strengths measure ($r = .23$, $p < .01$) indicated this was not a serious issue. When three measures sample essentially related constructs such as differing aspects of the organisational environment some conceptual overlap is inevitable. The internal environmental uncertainty measure and the competitive strengths measure though reported a very strong intercorrelation of .75, indicating that these two instruments share 56% of their variance. This could indicate that they are largely sampling the same construct. The relationship strengths of these two measures with the IVs tended to be roughly comparable in the correlation analysis. However, evidence for discriminant validity is shown by R^2 change statistics for PA - this IV accounted for approximately 50% more of the variance in the model with regards to the competitive strengths and weaknesses measure, than with the internal environment measure. Also, a significant PA x NA

interaction effect was found for the internal environment measure, but not for the competitive strengths measure. This, further suggests that the internal environmental uncertainty measure and the competitive strengths measure are tapping sufficiently distinct constructs so as to be regarded as distinct entities. It also seems likely that at least a proportion of the variance shared by these interdependent variable relations may be attributable to shared method variance, rather than shared construct variance (Kazdin, 1995). That is, each set of measures were completed by the same participant using the same assessment format (i.e. paper-and-pencil measures).

Two aspects of the questionnaire may have impacted on the integrity of the results obtained. One was that the measures were presented in the same sequence in each questionnaire, raising the possibility of order effects. In future, this possibility should be contained by systematically altering the sequence of instrument presentation. The second issue is that the nature of the questions may artificially bias the affect score. Research has suggested that NA shows its greatest relations with work stress and work strain assessments when question content is negative (Burke et al., 1993). In other words negative phenomena are more likely to be responded to by the high-NA individual's negative cognitive set (Clark & Watson, 1991). Further, according to this hypothesis when survey questions are more positive in nature, PA should show an equal or stronger relationship with survey scores. However, an alternative interpretation of this is that these affect-primed response sets are triggered by changes in states affect and are latent until this time (Daniels, 1998). Thus, affective state still governs perceptual biasing processes in a non-reflexive manner.

The external environment measure displayed weaker relationships with the affect variables throughout the analysis. There is no theoretical explanation for these weak relationships relative to those obtained with the other two DV measures. This could indicate that the external environment measure failed to adequately sample the construct it was intended to. One might have expected the competitive strengths measure to show a greater affinity with the external environment measure (than with the internal environment measure) as an analysis of one's competitive strengths and weaknesses relative to those of one's competitors' explicitly requires evaluation of the external market environment. However, as this was not the case a question must be asked as to the construct validity of the external environment measure.

Evidence obtained through the comparison of correlation strengths (c.f. Table 5) suggests that the restricted sample size constrained the ability of the results of the present study to be compared with those of the Daniels' (1998) study. For example, the present study obtained no significant correlational relationships between the dependent variables and NA, contrary to the findings of Daniels. However, further analysis found that there was no significant difference between the Pearson's coefficients for the present study and that of Daniels. This suggests that if the present study had obtained a larger sample then the results garnered may have been more comparable to Daniels' results. The present study may also have benefited from sampling a wider range of business sectors (i.e. the manufacturing and voluntary sectors were underrepresented in the sample). This would not only have provided a more representative picture of the New Zealand

economic sector in general but, allied with an enhanced sample size, allowed the subdivision of the results and permitted an effect investigation of potential industry sector effects.

The analysis of affect's potential role as a method effect variable or measurement contaminant was hampered by the inability to test for whether the difference between the zero-order and first-order correlation coefficients was statistically significant, and whether affect operated as a genuine method effect variable or merely as a measurement contaminant. The employment of more sophisticated analytical methods could overcome this deficiency. The sophistication of these methods was beyond the bounds of the present study as it was intended to be an exploratory investigation of the affect -> environmental perceptions hypothesis and was conceptually constrained by the need to stay relatively close to the Daniels (1998) methodology, in order to perform a valid replication. However, latent variable models such as the confounded measurement model and the congeneric or nonmeasurement model have demonstrated enhanced capabilities to make valid causal attributions (Williams et al., 1996).

FUTURE RESEARCH DIRECTIONS

The present study employed a cross-sectional, correlational paradigm. While appropriate for the research goals of the present study, future research would benefit from employing other design paradigms. Now that evidence for the existence of an affect -> environmental perceptions link has reached a substantive point, experimental studies may be employed to test specific aspects of this

relationship. The experiment can maintain the control of extraneous variables that are required to speculate more authoritatively as to causal relationships (Cook & Campbell, 1976). However, the ability of the experimental study to remove the variable of interest from the background 'noise' of extraneous variables is also potentially problematic. This containment can produce a restriction of the external validity of the results obtained. Human perceptual processes operate in a vast sea of potential influences and to accurately (as is possible) model them they need to be examined in this naturalistic context. A research design with greater applicability then would be the field study in which the researcher actually observes the mechanics of the strategic planning process as they unfold. Part of this research format would then be in the form of the classical anthropological participant-observer paradigm. Allied to this could be more traditional objective data collection methodologies such as the self-report survey, to obtain a sample of the participant's perceptions. To be effective this sort of research design should employ a longitudinal format to demonstrate how affect and emotionality may impact on perceptions. A longitudinal design not only provides a more accurate assessment of the strength of a relationship due to the multiple samples taken, but also enables more valid estimations of causality to be made. It is recommended that future research in this area adopt this model of at all possible.

The research design employed in the present study still has a role to play. Seemingly discrepant results have been obtained between the present study and that of Daniels (1998) in regard to the potential role that NA may have in the perceptual biasing process. Further questionnaire survey designs may seek to

replicate this analysis and establish the veracity of the conclusions reached so far. Replication is a very important process and is one of the cornerstones of the scientific paradigm. Studies of this nature then are every bit as important and necessary as research that moves into new areas of knowledge. Furthermore, technical improvements may be made to these replication studies in terms of the instruments employed and the statistical methodologies implemented to analyse the data sampled.

Future research conducted with the appropriate sample size for the research context may also pay greater attention to industry sectors, emphasising the effective sampling of a broad range of areas and further sub-dividing this variable to enable finer differentiation to be made. Organisational factors may also be controlled for.

The limitations expressed above notwithstanding, the present study has demonstrated that there is a role for positive affect in the strategic planning process. Future research on this area cannot ignore the implications of this finding and continue to exclude emotion from their analyses and theoretical models. It seems likely that without considering the role of affect in strategic planning it is unlikely that organisational theorists will ever be able to develop a comprehensive and valid understanding of these process, as a key component of the model will be missing - emotion.

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APPENDIX A

COVER LETTER TO PARTICIPANTS

Dear Sir/Madam

I am a post-graduate Organisational Psychology student at Massey University. I am conducting research into understanding and improving strategic management capabilities. Specifically I am looking at the effects that emotions may have on decision-making when making strategic level decisions. Because of the subtle yet powerful effect emotions have on us there is a strong need for greater understanding in this area. This research is being conducted with the consent of the Massey University Human Ethics Committee (MUHEC).

To participate in this research you need to be a manager who is currently employed and has been at work within the last two weeks. Participation will involve filling out the following questionnaire and returning it in the envelope provided. The questionnaire should take approximately ten minutes.

Strategic decision-making is a top-level function within an organisation. It encompasses long-term planning, direction and the development of an organisational vision for the future. Information is received from both the internal (organisational) environment and the external (market) environment. However, this information is often incomplete and usually there is a need to make assumptions or inferences from the information that is available. Strategic planners themselves tend to agree that the single most important factor for success in this area is analytic and conceptual thinking. However, due to the usually ambiguous information and the need for the individual or groups to make large amount of inference because of this, personal or collective biases have great latitude to distort decision-making. Examples of potential biases include prejudices, mental models or pervasive emotional states. The first two factors are widely known, but there is less awareness of the role that emotion plays in affecting our every day lives.

The ambiguous nature of the strategic environment leads strategic decision-makers to use their own 'mental models' (or world-views) upon the few facts at their disposal, to form a more complete picture. Mental models are ingrained assumptions and generalisations that all people use to help understand how the world works. Two people can look at the same situation and see two different things, due to selectively emphasising details of the situation that conforms to the expectations generated by their mental models. The development of mental models is a product of factors such as a person's emotional predispositions and experiences as well by the individual's rational knowledge base. The subject of emotions and how they affect us have received more and more attention in recent years. Concepts such as 'Emotional Intelligence', largely unheard of ten years ago, are moving toward the mainstream of business thought.

For these reasons there is a strong need to understand this issue. This will enable the development of awareness programmes, training courses and the like to enhance strategic decision-making and promote management effectiveness and well being under these circumstances.

Participation in this study is voluntary - you have the right to decline to participate. The filling out and return of the research questionnaire is taken as consent to use your data in the study.

All information provided by you will be treated in the strictest confidence. There will be no means of identifying the ownership of individual questionnaires. Data will be published in the form of aggregate data and summaries – no individual data will be published in these summaries. The final thesis may be published in a peer-reviewed journal. Once the study is completed, all the questionnaires will be destroyed.

The research will strictly adhere to the principles laid out in the MUHEC code. Under this code you have the right to:

- i. Contact the researcher or his supervisor at any time during the research to discuss any aspects of the study
- ii. Decline to answer any question
- iii. Provide information on the understanding that all responses will be held in complete confidence by the researcher, to be used only for the purposes outlined in the information sheet. It will not be possible to identify individuals in any reports of the results.
- iv. Receive information about the results of the study on its completion.

If you would like to have a summary of the results of this study when it is completed I would be more than happy to oblige. Just fill in the request for a copy of the results form and return it, either with your questionnaire, or alternatively if you wish to remain completely anonymous, send it back in a separate envelope. In either case your anonymity is guaranteed, I will be the only person to have access to your reply.

If you have any queries, either now or at any later date, please feel free to ring me on 021 2600 283, or e-mail me at Ian.Galley.1@uni.massey.ac.nz. Alternatively, you can speak to my supervisor for this project: Associate Professor Douglas Paton, School of Psychology, Massey University, Palmerston North, (ph) 06 350 5799 ext. 2064, e-mail D.Paton@massey.ac.nz.

Thank you for your time,

Ian Galley

APPENDIX B

RESEARCH QUESTIONNAIRE

This questionnaire consists of three sections:

1. A background information questionnaire,
2. A mood questionnaire (called the *Positive and Negative Affect Schedule* or *PANAS*), and
3. A three part environmental perception questionnaire

1. Demographic Data Sheet

Please answer the following questions as accurately as possible. This information will allow a general picture of the people responding to this survey to be constructed. Furthermore, the information can be broken down into subgroups to make comparisons between groups of people involved. It will also allow comparisons to be made with any other research that has been done in the same general area.

1) Sex Male θ
 Female θ

2) Age <20 θ 45-49 θ
 20-24 θ 50-54 θ
 25-29 θ 55-59 θ
 30-34 θ 60-64 θ
 35-39 θ >64 θ
 40-44 θ

3) For how many years have you worked for your present organisation?

4) For how many years have you occupied your present position?

5) How many management levels is your present position below that of your organisation's CEO (or equivalent)?

0	θ	3	θ
1	θ	4	θ
2	θ	>4	θ

6) Roughly how many people does your organisation employ?

7) What is your organisation's approximate annual turnover? (NZ\$)

8) What business sector does your organisation occupy the most? (e.g., public sector, manufacturing, services, voluntary)

9) What is your job description or category? e.g., General Management, Marketing/Sales, Professional, Finance/Accounting

10) Would you say your job is generally *internally* focused (like production, for example) or *externally* focused (like sales, for example)? (tick one)

Internally Focused	<input type="checkbox"/>
Externally Focused	<input type="checkbox"/>

2. The Positive and Negative Affect Schedule (PANAS)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer (i.e. 1 to 5) in the space next to that word.

1	2	3	4	5
very slightly or not at all	a little	moderately	quite a bit	extremely

Indicate to what extent you generally feel this way, that is, *how you feel on the average*.

Use the following scale to record your answers:

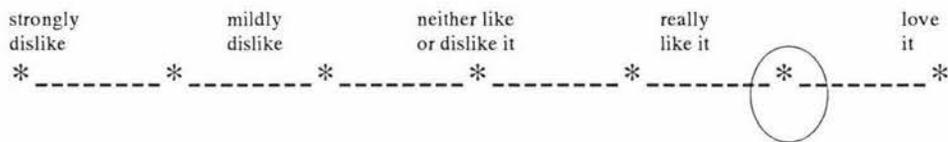
Item:	i) ___ interested	xi) ___ irritable
	ii) ___ distressed	xii) ___ alert
	iii) ___ excited	xiii) ___ ashamed
	iv) ___ upset	xiv) ___ inspired
	v) ___ strong	xv) ___ nervous
	vi) ___ guilty	xvi) ___ determined
	vii) ___ scared	xvii) ___ attentive
	viii) ___ hostile	xviii) ___ jittery
	ix) ___ enthusiastic	xix) ___ active
	x) ___ proud	xx) ___ afraid

3. Organisation Environment Measures

The following questions refer to your perceptions of the environment that your organisation operates in - both internal and external. For each item circle the star along the scale that best represents how you feel about that particular question.

For example,

How do you feel about chocolate flavoured ice-cream?

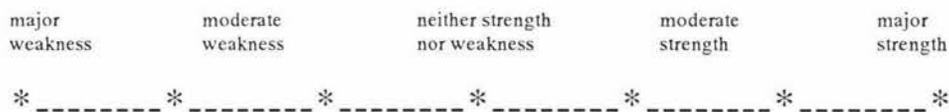


Please note that the descriptions above the scale (e.g. mildly dislike) do not correspond to the *,s on the scale. They are merely to give a general guide as to the relative strengths of the continuum.

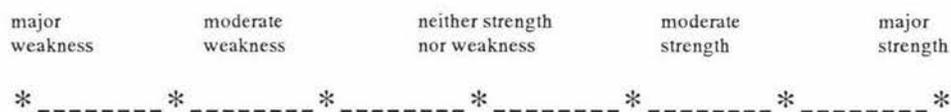
1. Internal environment measure

Please rate the following aspects of your organisation as strengths or weaknesses.

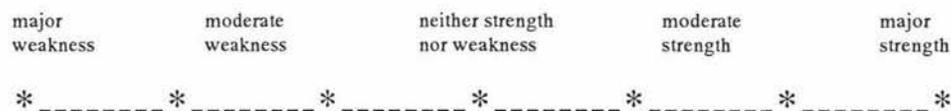
i) The interests and abilities demonstrated by top management



ii) The strategic planning system (i.e. long-term planning and direction for the organisation)



iii) The abilities of your employees



iv) Knowledge of clients needs

major weakness	moderate weakness	neither strength nor weakness	moderate strength	major strength
*	*	*	*	*

v) Services provided to clients (e.g. how well your organisation 'looks after' its clients and goes that 'extra step' to providing for their needs)

major weakness	moderate weakness	neither strength nor weakness	moderate strength	major strength
*	*	*	*	*

vi) Information on market share

major weakness	moderate weakness	neither strength nor weakness	moderate strength	major strength
*	*	*	*	*

vii) Quality of products produced/services rendered

major weakness	moderate weakness	neither strength nor weakness	moderate strength	major strength
*	*	*	*	*

viii) The form and structure of the organisation (i.e. the way your organisation is set-up and structured. This could include the levels of hierarchy, inter-organisation communication etc)

major weakness	moderate weakness	neither strength nor weakness	moderate strength	major strength
*	*	*	*	*

ix) Distribution channels (i.e. the efficiency with which your organisation gets the products or services it produces out to the consumer)

major weakness	moderate weakness	neither strength nor weakness	moderate strength	major strength
*	*	*	*	*

2. External Environmental Uncertainty Measure

The external environment refers to the marketplace that your organisation operates in. The marketplace of an organisation that produces agricultural machinery will obviously have a very different nature to one that develops hi-tech computer processors. These two external environments will vary in terms of such things as how competitive, how changeable and how predictable in the long-term they are.

Please rate the **environment** that your organisation face in terms of... "

i) How *Stable* or how *Turbulent* it is

very stable	moderately stable		moderately turbulent	very turbulent
-----	*-----*	*-----*	*-----*	*-----*

ii) How *Simple* or how *Complex* it is

very simple	moderately simple		moderately complex	very complex
-----	*-----*	*-----*	*-----*	*-----*

iii) How *Predictable* or *Unpredictable* it is

very predictable	moderately predictable		moderately unpredictable	very unpredictable
-----	*-----*	*-----*	*-----*	*-----*

iv) How *Static* or how *Dynamic* it is

very static	moderately static		moderately dynamic	very dynamic
-----	*-----*	*-----*	*-----*	*-----*

v) How *Threatening* it appears to be

completely non-threatening	largely non-threatening		moderately threatening	very threatening
-----	*-----*	*-----*	*-----*	*-----*

vi) How *Exciting* or *Dull* you feel it is

very
exciting

moderately
exciting

moderately
dull

very
dull

----------*-----*-----*-----*-----*

vii) How *Certain* or *Uncertain* you feel it is

very
certain

moderately
certain

moderately
certain

very
uncertain

----------*-----*-----*-----*-----*

3. Competitive Strengths Measure

Compared to your organisation's strongest competitors, please indicate how you feel your organisation rates on the following dimensions...

i) Strategic Direction

very poor	moderately poor	average	good	very good
-----	*-----*	*-----*	*-----*	*-----*

ii) Marketing Effectiveness

very poor	moderately poor	average	good	very good
-----	*-----*	*-----*	*-----*	*-----*

iii) Managerial Skills

very poor	moderately poor	average	good	very good
-----	*-----*	*-----*	*-----*	*-----*

iv) Public image

very poor	moderately poor	average	good	very good
-----	*-----*	*-----*	*-----*	*-----*

v) Leadership

very poor	moderately poor	average	good	very good
-----	*-----*	*-----*	*-----*	*-----*

