STRATEGIC RISK BEHAVIOUR AND ITS TEMPORALITIES: BETWEEN RISK PROPENSITY AND DECISION CONTEXT

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ABSTRACT

What are the determinants of strategic risk behaviour? Are they the dispositional characteristics of decision makers or the situational constraints? Or both? The empirical evidence is on all sides. We believe the issue has not been satisfactorily resolved so far because of the continued neglect of the fundamental role of time in risk behaviour. Given that risk is embedded in time, we need to recognize two critical aspects of the temporal dimension. The first is concerned with risk horizons, as in short-range and long-range risk horizons. The second temporal aspect relates to individual future orientations of the top managers, as in near-future and distant-future orientations. We propose in this article a temporal framework of strategic risk behaviour in which the two temporalities are integrated with risk propensity and perceived decision context. We then develop, based on this temporal framework, the contingent answers for the relative roles of dispositional characteristics and situational constraints in determining strategic risk behaviour.

INTRODUCTION

Over three decades ago Kogan and Wallach (1967) articulated the fundamental question about the determinants of risk behaviour in terms of the relative roles of the dispositional characteristics of decision makers and the situational constraints:

Having gained an overview of the kinds of relationships that dispositions toward risk or conservatism exhibit with other kinds of differences among individuals, as well as with information on the kinds of situational characteristics that can be expected to influence the riskiness of a person’s decisions, it is necessary to perform some kind of psychological weighing of these two classes of determinants. How important are individual consistencies relative to situational constraints when it comes to predicting someone’s inclination for risk or conservatism? (pp. 207–8; emphasis added)
The issue remains unresolved. In recent years, however, risk and risk taking have assumed increasing significance in the study of strategic decision making. Strategic risk behaviour constitutes an essential perspective in analysing strategic behaviour. Broadly defined, strategic risk taking refers to ‘corporate strategic moves that cause returns to vary, that involve venturing into the unknown, and that may result in corporate ruin’ (Baird and Thomas, 1985, p. 231). Considering that risk is a problematic aspect in the management of business organizations, it is important to understand the reasons that lead strategists to engage in risky decision making behaviour. In this article we attempt to at least partially answer the Kogan–Wallach question by developing a contingency framework of strategic risk behaviour based on the decision maker’s risk propensity and two significant, but thus far neglected, aspects of the temporal dimension.

We propose a temporal contingency framework that seeks to reconcile some of the conflicting theories about the determinants of risk behaviour. Extensive research on risk taking carried out by psychologists over the years has resulted in two competing paradigms concerning the attributes of risk taking behaviour – one suggested by the personality psychologists who focus on individual differences in risk taking behaviour, and the other by the experimental psychologists who deal with risk taking in such terms as subjective expected utility (Lopes, 1987).

The view of the personality psychologists focuses on individual differences in risk taking, so that it ascribes risk behaviour mostly to the general traits and dispositional tendencies of decision makers. Scholars have observed that individuals are fairly consistent in their attitudes towards risk – some people seem more comfortable with risk taking than others (Bromiley and Curley, 1992). Based on such a stable individual attribute, researchers differentiate decision makers in terms of their risk propensity – namely, as being either risk averters or risk seekers. Some researchers also believe that a dispositional risk propensity can help explain, to a large extent, the risk behaviour of individuals.

In contrast, the experimental psychologists challenge the consistency of such dispositional traits, and argue that situational factors have a greater influence on risk taking behaviour (Kahneman and Tversky, 1979; Slovic, 1972). Unlike other psychological attributes, the risk propensity of decision makers seems to lack constancy across decision situations (MacCrimmon and Wehrung, 1986; Schoemaker, 1990). Since this view attempts to understand Everyman’s risk taking behaviour, it regards the external stimulus as the more important. Many empirical studies suggest that situational factors such as outcome history and decision framing are salient in determining the riskiness of strategic decisions (Bowman, 1982). Hence, the view of the experimental psychologists – which treats risk taking as situation-contingent – seems to command substantial support.

Since both views have their virtues and considerable empirical support, efforts have been made to integrate them, mostly following an eclectic approach (e.g., Baird and Thomas, 1985; Sitkin and Pablo, 1992). These studies suggest that the dispositional risk propensity interacts with situational factors in determining risk taking behaviour. In this article we present an alternative framework for reconciling the two views on the determinants of strategic risk behaviour. The key to truly integrating both views, we believe, is to recognize that there is a temporal dimension in the risk taking construct (Strickland et al., 1966). Time is critically relevant to risk taking, because risk and uncertainty are intimately related (Yates and Stone, 1992) and ‘uncertainty is embedded in time’ (Lopes, 1987, p. 289). However,
psychological theories of risk behaviour rarely incorporate this temporal dimension as a core element. We propose a temporal framework that embraces both views of strategic risk behaviour. In particular, risk horizons and the future orientations of top managers play key roles in this temporal contingency framework.

**DETERMINANTS OF RISK BEHAVIOUR: RISK PROPENSITY VERSUS DECISION CONTEXT**

The field of strategic risk taking draws heavily on studies of individual risk behaviour. The rationale is that, to a certain extent, the strategies of an organization reflect the dispositions of the top executives in terms of their subjective attributes, such as their background, beliefs, attitudes, and problem-solving styles (Das, 1986; Hambrick and Mason, 1984). Therefore, the risk taking behaviour of top managers would have a significant impact on the riskiness of strategic choices (Baird and Thomas, 1985; Bowman, 1982).

Before examining strategic risk taking behaviour – or strategic risk behaviour for short – it would be helpful to clarify what we mean by risk. Risk appears to be one of the most commonly abused concepts in social science, and researchers often depart significantly in their constructs of risk (Yates and Stone, 1992). Economic and psychological sciences define risk as a condition in which decision makers know the possible consequences of the decisions as well as their associated probabilities (Arrow, 1971). In strategic management, it is seldom that all possible decision consequences and their probabilities are known. Thus, risk is often used as if it is the same as ‘uncertainty,’ or unpredictable consequences and/or probabilities (Baird and Thomas, 1985). In this sense, strategic management scholars refer to risk as variance in performance beyond the control of decision makers. In recent years, recognition has been growing in the strategy literature that managers conceive of risk only as ‘down-side’ possibilities. That is, managers are more concerned with negative variations in performance, not performance variances as a whole (March and Shapira, 1987). For our purposes here, we define risk broadly as the unpredictability in decision outcomes. Thus, risk taking would be to consciously undertake tasks which are associated with uncertain consequences.

As we mentioned earlier, the major theories of risk taking are split into two competing paradigms – one focusing on individual dispositional differences and the other on emphasizing situational factors. In the remainder of this section, we briefly review the research on both views. We also note several approaches that have been proposed for integrating these two views of risk behaviour.

**Dispositional Characteristics**

A large number of empirical studies have reported on individual differences in risk taking behaviour (Alderfer and Bierman, 1970; Ghosh and Ray, 1992; Rowe, 1977). In his research with the ‘ring toss’ game, McClelland (1961) found that children with high motivation to succeed tended to throw rings onto a peg from intermediate distances – that is, to take moderate risks. One study that directly examined the consistency of dispositional risk propensity was carried out by Schneider and Lopes (1986). They presented one risk-averse group and one risk-seeking group multiple lottery choices as a heterogeneous set of stimuli for risk taking. The results indicated that the risk-seeking group tended to consistently
prefer riskier choices as compared with the risk-averse group. Furthermore, researchers have identified certain personal characteristics and attributes – such as gender, age, and locus of control – that are related to an individual’s risk-taking behaviour (Miller et al., 1982; Taylor and Dunnette, 1974; Vroom and Pahl, 1971), supporting the idea that risk behaviour is related to personal characteristics. Researchers have also used the term ‘risk propensity’ to refer to a stable individual trait towards taking or avoiding risk (Fischhoff et al., 1981; Rowe, 1977).

According to Sitkin and Weingart, risk propensity can be defined as ‘an individual’s current tendency to take or avoid risks’ (1995, p. 1575). They also note that even the critics of the dispositional approach to risk ‘have employed the traditional conception of risk propensity as a stable individual attribute’ (p. 1575). Although their usage of the term differs somewhat from our definition, the belief underlying such usage is that some kind of stable within-person across-situation consistency does exist. Apparently, this definition links risk propensity causally with actual risky decision making. Although a risk-seeking propensity does not automatically result in high-risk behaviour, risk propensity is probably the single most important attribute that contributes to risk behaviour (see Sitkin and Pablo, 1992). Previous studies have identified risk propensity as the causal antecedent of actual risk behaviour (Sitkin and Weingart, 1995). Hence, we assume a linear causality between risk propensity and risk behaviour – a risk-seeking propensity leads to more risk taking or high-risk behaviour.

Based on the belief that decision makers are distinct in their risk propensity – and consistently so – strategic management scholars have looked into the relationship between risk propensity of top managers and organizational outcomes (e.g., Taylor and Dunnette, 1974). This line of research may be subsumed under the so-called subjective view of strategic decision making, in which the psychological and other characteristics of top managers are believed to be useful in explaining variations in strategic choices, including strategic risk taking (Das, 1986; Das and Teng, 1997).

In contrast to the above belief, there is also some evidence that contradicts the consistency of dispositional risk propensity (Schoemaker, 1990; Slovic, 1962). Schoemaker (1990), for example, found low correlation of risk propensity within subjects across decision domains. Other researchers also report a low level of correlation among multiple risk measures (Kogan and Wallach, 1964; MacCrimmon and Wehrung, 1986). These results suggest that individual consistency in risk behaviour across situations is open to some question.

Situational Characteristics

While the evidence for a robust dispositional risk propensity remains inconclusive, a large number of studies suggest that situational factors – such as problem framing and perceived context of the decision – have much to do with risky decisions (e.g., March and Shapira, 1987; Schoemaker, 1990). Using four types of risk-taking measures, Slovic (1962, 1972) found low intercorrelations among the various measures of risk taking in different situations. He thus concluded that the results of his study ‘must be viewed more as support for the importance of situational factors than support for the notion of risk-taking propensity as a stable trait’ (1972, p. 133).

A good example supporting the situation-contingent view is concerned with individuals’ risk-averseness. On the one hand, it has been found that most people
are risk averse in gain situations – that is, they prefer sure gains (say $300) to risky options (say 80 per cent chance of winning $400) even though the expected value of risky options (80% × $400 = $320) is higher. On the other hand, decision makers also tend to be risk-seeking in loss situations – that is, they prefer risky options (say 80 per cent chance of losing $400) to sure loss (say $300). Although some studies suggest an opposite preference – for example, Thaler and Johnson (1990) – in general, the pattern reflected in the above example has been fairly well supported (MacCrimmon and Wehrung, 1986; March, 1988; Tversky and Kahneman, 1991).

Over the years, psychologists have proposed various theories to account for such changes in risk behaviour due to situational differences. One of the best known is Kahneman and Tversky’s (1979) prospect theory, according to which decision makers evaluate the risky options through a subjective value system characterized by reference dependence and loss aversion. Essentially, individuals are believed to code outcomes relative to some reference point – such as the status quo – and then interpret the outcomes as either a loss or a gain. Prospect theory suggests that people can shift their reference points – or adaptive aspirations (March, 1988) – so that their risk behaviour may change accordingly. In addition, since people are loss-averse, they weigh losses and disadvantages more heavily than gains and advantages. Empirical studies show that losses are weighted about twice as much as gains (Tversky and Kahneman, 1992). Therefore, people tend to be risk-averse in gain situations to avoid possible loss, and they become risk-seeking in loss situations in order to recover the loss.

The same phenomenon has been identified in strategic risk taking. Managers report that they take less risks when their companies are performing well (MacCrimmon and Wehrung, 1986; March and Shapira, 1987; Shapira, 1995). With few exceptions, the literature largely confirms a negative correlation between risk and performance – that is, troubled firms tend to take more risk, which leads to even worse performance (Bowman, 1982; Bromiley, 1991).

Against this background, Bateman and Zeithaml (1989a, 1989b) identified ‘perceived current context’ as one of the key dimensions of the psychological context of strategic decisions. In line with prospect theory, the essence of the perceived decision context is that decision makers adjust their risk taking behaviour by assessing their current situation with regard to their aspiration level. When the decision context is perceived as positive, decision makers tend to be risk averse. Nevertheless, the very same person could become a risk seeker if he or she perceives the decision context as negative – that is, being lower than the aspiration level or reference point. In a recent study, Hodgkinson et al. (1999) confirmed that strategic decision making is strongly affected by the positive or negative framing of decision scenarios.

Integrative Approaches

It would seem that the two approaches discussed above are at odds as to the sources of risk behaviour – while the personality psychologists’ view is intended to understand how people are different, the experimental psychologists’ view probes into the risk behaviour of people as if they were basically all alike. Extending this controversy beyond risk behaviour, Davis-Blake and Pfeffer suggest that dispositional effects in organizational research are ‘just a mirage’ (1989, p. 385). However, in defending the dispositional approach, House et al. reviewed the literature and

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concluded that ‘the evidence for the predictive validity of dispositions is too strong to dismiss’ (1996, p. 204). In fact, most theorists today would agree that behaviour is jointly determined by both dispositions and situations.

Given this background, it is easy to see that the core dispute in the area of risk behaviour has remained the same for decades – ‘How important are individual consistencies relative to situational constraints when it comes to predicting someone’s inclination for risk or conservatism?’ (Kogan and Wallach, 1967, p. 208). Thus, integrative models constitute the third approach to understanding strategic risk behaviour, mainly as an attempt to reconcile the positions of the other two approaches. As Bromiley and Curley conclude, the key would be to recognize ‘the joint influence of situation and personality characteristics’ (1992, p. 125).

One such integrative model was proposed by Baird and Thomas (1985), who provided an exclusive list of factors – including both personal and strategic problem variables – that possibly affect strategic risk behaviour. Whereas personal variables include a decision maker’s self-confidence, knowledge, biases, heuristics, and preferences, strategic problem variables include framing, variance, probabilities, outcomes, and reversibility and controllability. In addition, Baird and Thomas (1985) discussed the impact of environmental, industry, and organizational variables on strategic risk behaviour. By comparison, Sitkin and Pablo’s (1992) model is more specific and holds that risk behaviour is mostly determined by risk propensity. Risk perception regarding positive versus negative decision context only helps ‘to explain variation in individual risk behaviour within the bounds generally defined by risk propensity’ (Sitkin and Pablo, 1992, p. 29). Nevertheless, risk propensity itself is believed to vary on the basis of outcomes of previous risk behaviour – failure promotes decision makers to alter their risk propensity.

Lopes (1987) proposes a two-factor theory that ‘uses both a dispositional factor and a situational factor to explain risky choice’ (1987, p. 275). To her, the dispositional factor describes an individual’s general trait regarding either risk averting (i.e., achieving security) or risk seeking (i.e., exploiting potential). The situational factor refers to a decision maker’s response to immediate needs. Lopes suggests that the relative preference among risky options is the product of the dispositional factor and the situational factor – the higher the value, the more preferable the choice. Since people are supposed to move towards the choice that has more value to them, the two-factor theory has been called a motivational theory.

In sum, all existing models which attempt to reconcile the two views of risk taking are integrative – that is, they seek to describe the joint effect of dispositional and situational factors on any single risky decision.

It is our belief that a more effective integration should adopt a contingent approach – namely, consider the effects of the dispositional and situational factors in conjunction with the temporal dimension of decisions. The temporal element is critical in understanding risk behaviour because it ‘gives risk both savor and sting’ (Lopes, 1987, p. 289). Pope (1983) noted that risk theorists have failed to appreciate the ‘fundamental import of time for uncertainty’ (p. 137). Risk decisions can be differentiated as involving future consequences that are either immediate or delayed (Stevenson, 1986). Although time has been increasingly incorporated in more recent studies on risk (Loewenstein, 1988; Stevenson, 1992; Wu and Gonzalez, 1999), the temporal dimension is remarkably missing in the attempts to integrate dispositional and situational factors.

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In this article we propose to include the temporal characteristics of decisions to examine the above dispute about strategic risk behaviour, and thereby develop a richer framework for further research and understanding. More specifically, we propose that the time horizon of decisions has significant saliency for both the factors. We suggest that either the dispositional or the situational factor may dominate an individual’s thinking and behaviour, given the specific temporalities of decisions. Hence, one of the two factors may not be temporally salient in particular kinds of decisions.

TIME IN STRATEGIC RISK BEHAVIOUR

As indicated earlier, we propose to develop an alternative contingent model of strategic risk behaviour by incorporating in it the dimension of time. The role of time in organization and management has been attracting increasing interdisciplinary interest in recent years (Bluedorn and Denhardt, 1988; Das, 1990, 1993; Das and Teng 1997; Thoms and Greenberger, 1995). Every managerial decision involves a time horizon. Time serves as an important variable for differentiating strategic decisions – their duration, periodicity, and pace. Strategies that focus on time and the future are the subject of a number of research investigations and practitioner-oriented publications. The perception of the future time dimension was found to be particularly salient in strategic planning (Das, 1986). Strategic planning is concerned with future events, and the effects of strategic decisions unfold in the flow of time. Indeed, time has been called ‘the hidden dimension of strategic planning’ (Das, 1991). Furthermore, studies have identified the time perspective as a determinant of strategic decision making processes (Das, 1987).

On the topic of strategic risk behaviour, the time perspective is especially relevant. One key aspect of risk taking is discounting in time. In other words, individuals’ risk behaviour differs as it relates to immediate results and postponed results (Nisan and Minkowich, 1973; Shelley, 1994). Researchers hypothesize that risks are more easily accepted if ‘intended benefits are obtained at a shorter term’ and/or ‘undesired consequences have delayed . . . effects’ (Vlek and Stallen, 1980, p. 291). The theory that explains this phenomenon is the discounted utility model, which suggests that decision makers discount the expected effects of their decisions in relation to their temporal distance from the present. Thus, more distant gains/losses will have lesser significance to the decision maker. It has been found, however, that individuals’ discount rates are inconsistent across decision scenarios (Kirby, 1997; Prelec and Loewenstein, 1991). For example, decision makers discount future gains more than future losses, and the discount rates decline with time and size of reward (Loewenstein and Thaler, 1989).

Other than the anomalies in the discounted utility model, researchers have also examined the effects of timing, decision numbers, and decision patterns on risk taking. Strickland et al. (1966) found that subjects showed greater restraint in risk taking in after-the-event gambling as compared to normal before-the-event gambling. Lopes (1996) and others explored different risk behaviours in one single game versus repeated games. Read et al. (1999) compared the difference between simultaneous choices (making several decisions at a time) and sequential choices (making one decision at a time). They reported that simultaneous decisions tend to be more risk seeking and more diversified, and also to give more weight to
delayed consequences. Although time and temporality are increasingly being recognized as important in studying risk, it appears that they have not been employed to help address the issue concerning dispositional versus situational influences in risk taking.

**TEMPORALITY ONE: RISK HORIZONS**

In this article we apply the idea of temporality to one key concept in risk – individuals’ risk propensity, or their current tendency to take or avoid risks. For the sake of clarity we will use the terms risk seeking (for risk taking) and risk averting (for risk avoiding), as the term ‘risk taking’ often connotes the generic process in the literature.

We suggest that individual risk propensity can manifest itself with different saliencies in decisions involving different time horizons. We examine this question by dichotomizing this horizon – which we call risk horizon – into short-range and long-range. Clearly, of course, one could also consider medium-range. To many theorists, strategic risk taking is closely related to strategic planning (Drucker, 1972; Miller et al., 1982), because both risk taking and planning have their foundation in futurity. Hence, time, strategic risk taking, and strategic planning are dynamically interrelated. Short-range risk behaviour (high or low) refers to seeking or averting risk in short planning horizons, while long-range risk behaviour (high or low) is seeking or averting risk in longer planning horizons.

These two types of risk behaviour are distinct because strategic risk taking may fall into either short or long planning horizons – and strategists’ risky decisions for these two horizons are not necessarily the same. For example, many people take little risk with their financial security in retirement occurring in the long run – and hence they start investing early in their lives rather than just buying lottery tickets later. However, the same people may be very aggressive in their short term investment activities. Thus, for the long run, they would have a low-risk behaviour, while for the short run relatively high-risk. In fact, studies show that outcomes occurring at various points in time trigger different risk taking behaviours (Mowen and Mowen, 1991; Nisan and Minkowich, 1973).

An experiment by Lopes and Casey (1994) provides some indirect support for our differentiation between short-range and long-range risk behaviour. In their experiment, the subjects were assigned to one of the two strategic positions – the defensive and the offensive. The subjects were then asked to play games that had immediate outcomes, in both winning and losing situations. They found that an individual’s risk behaviour (‘risk preference’ in the terminology of the researchers) was responsive to their decision situations (i.e., winning or losing), but not to their strategic positions (i.e., defensive or offensive). Indeed, our differentiation would predict that people’s short-range risk behaviour would not be influenced by their strategic positions (which are, by definition, long-range).

Basically, we are suggesting that decision makers do show a consistent pattern of risk behaviour, but only under two specific conditions. First, in close-to-neutral contexts that do not involve significant previous gain/loss, decision makers tend to exhibit their dispositional preference towards risk seeking. As originally observed by Mischel (1968), dispositional effects are most noticeable in weak situations – that is, where stimulus conditions are either weak or ambiguous. On the other
hand, when stimulus conditions are strong, the effects of dispositions are unlikely to surface, as situational factors would tend to dominate. Given this, it is understandable that some studies did not reveal consistent dispositional risk propensity across different decision contexts (e.g., Schoemaker, 1990). Second, when individuals make decisions involving long planning horizons, they are relatively free from the impact of situational factors – so that their individual dispositional differences can play a more prominent role. Adopting Mischel’s (1968) idea, long-range decisions may represent weak situations, in that the consequences of actions are more ambiguous. On the contrary, because short-range decisions are usually more predictable in terms of their routes and results, they tend to represent strong conditions – namely, those in which the decision makers are influenced heavily by situational factors. In this sense, those who plan for short time horizons will be more likely to contend with knowledge of prior outcomes, and their willingness to take risk will thus be dominated by the perceived decision context.

Short-Range Risk Behaviour

The concept of short-range risk behaviour is based on the situation-contingent view of risk taking, such as prospect theory. As we noted earlier, previous studies consistently reported that individuals in losing situations become greater risk seekers. Similarly, firms with performance below desired levels also tend to take more risks. The reason might be that people are loss averse – that is, they ‘value’ loss more than gain, so that an expected loss justifies increased risk taking (Kahneman and Lovallo, 1993). It must be stressed, however, that it is the perceived decision context that is directly responsible for risk taking (Bateman and Zeithaml, 1989a, 1989b). According to prospect theory, decision makers transform – by interpretation – an objective gain/loss into a subjective gain/loss. A subjectively chosen reference point, or adaptive aspiration, is used to perceive the decision context. As a result, the definition of positive or negative decision context is always a relative appreciation, leaving a lot of room for decision makers’ own aspirations.

This subjectivity helps explain why some people are emboldened by their initial wins, instead of turning conservative. It is possible that their wins have not reached their aspiration levels. For example, despite recent gains in a stock, an investor may continue to take risk by holding on to the stock, if her aspiration level has not been reached. The same situation may well be perceived as a winning one, if she never expected the stock price to go up in the first place. To her, the more likely behaviour would be risk averse – in other words, selling the stock.

In case the performance is below the aspiration level, the motivation for risk taking appears to be pertinent only to short term decisions. Lopes states that ‘the situational factor describes people’s responses to immediate needs and opportunities’ (1987, p. 275; emphasis added). Taking the time dimension into account, Mowen and Mowen propose that only ‘when decision outcomes occur in the present, decision makers tend to act in a risk-taking way if the decision is framed from a loss position’ (1991, p. 57). Apparently, only risk taking within a short time horizon enables decision makers to quickly recover from their loss position. Thaler and Johnson consider such motivation as based on ‘break-even effects’ – that is, ‘in the presence of prior losses, outcomes that offer a chance to break even are especially attractive’ (1990, p. 643).

An example of a strategic decision with primarily immediate consequences would be whether or not an airline should initiate an aggressive marketing
campaign. We maintain that this decision would be significantly influenced by the recent market gains or losses of the airline (decision context). A negative condition featured by recent market losses would likely prompt the firm to be aggressive in its advertising efforts (Lee, 1994). In contrast, a strategic decision with primarily distant consequences would be whether or not a firm should invest heavily in basic research that would eventually transform the technological standards of the industry. We suggest that this decision would be less constrained by current competitive conditions. Thus, following Mowen and Mowen’s (1991) view, we suggest that a perceived negative decision context stimulates more willingness to take chances in the short run – which translates to a short-range high-risk behaviour. (The interplay of these two factors – risk propensity and decision context – is shown figure 1.) This suggestion should not be construed as a mere restatement of prospect theory – rather, we apply prospect theory to its proper boundary condition, namely, the short planning horizon. Indeed, it is evident that almost all experimental evidence regarding prospect theory was gathered in decision situations with very short planning horizons, usually for immediate outcomes.

Integrating prospect theory and the temporal dimension, Thaler et al. (1997) noted the effect of ‘myopic loss aversion’, or a tendency to avoid short-term losses at the expense of much greater long-term gains. It was found that myopic loss aversion results from ‘the combination of short horizons and strong distaste for losses’ (Thaler et al., 1997, p. 648), and observed that it can be eliminated by having less frequent feedback (i.e., in our terms, long-range horizon). This finding supports our contention here.

As compared to decision context, dispositional factors will play a less important role in short-range risk behaviour. As Mischel (1968) noted, dispositional differences will be significant only when the impact of stimulus conditions is weak. That is, when the decision context is held constant, decision makers who are risk seekers

Figure 1. Strategic risk behaviours based on risk propensity, decision context, and risk horizon
will take more short-range risk than risk averters. However, this difference is unlikely to be consistent when decision contexts are heterogeneous. In sum, we maintain that although both situational and dispositional factors are relevant, their relative importance varies with the planning horizon. In short-range risk horizons, the more significant one is the situational factor. Therefore:

Proposition 1: Decision makers will exhibit high-risk behaviour in short-range risk horizons, if the decision context is perceived as a loss position (negative context).

Proposition 2: Decision makers will exhibit low-risk behaviour in short-range risk horizons, if the decision context is perceived as a gain position (positive context).

Hence, in summary, we have two distinct contingent relationships. If the risk horizon is short-range, decision makers (both risk averters and risk seekers) will exhibit high-risk behaviour if the decision context is perceived as a loss position (negative context), and low-risk behaviour if the decision context is perceived as a gain position (positive context). These risk behaviours are indicated in figure 1 as, respectively, (c) and (g) for a negative decision context, and (a) and (e) for a positive decision context. At this stage of our exposition, it would appear that the decision context is salient when the risk horizon is short-range. Hence, our partial response to the original Kogan–Wallach question is that the ‘situational constraints’ are more important than ‘individual consistencies’ or dispositional characteristics when we have short-range risk horizons.

Long-Range Risk Behaviour
In contrast with decisions in short planning horizons, strategic decisions that involve long-term outcomes are less relevant to strategists’ motivation to recover current loss or to retain current gain. That is, current situations have much less influence on long-range strategic risk taking compared to short-range risk taking. The reason is that long-range decisions have potential payoffs in the distant future and will be heavily discounted (Kirby, 1997; Loewenstein and Thaler, 1989; Stevenson, 1992). In other words, because a long term decision has limited impact on the current decision context, the influence of the current decision context on this decision tends to be limited as well. As we reasoned earlier, the opportunity to alter or maintain the current situation is exactly why the decision context influences risk propensity for the short run. Although it may be argued that even long-term performance is somewhat influenced by current performance, the effect would not be as great as it would be for short-range decisions. Because decision makers are relatively free from the ‘pressure’ of the current decision situation, their handling of longer term strategic risks can be expected to exhibit more of their dispositional risk propensity. Clearly, this dispositional attribute should be evident in its fullest potential when the decision context, or the domain of current situations, does not come into play. When the strategists are risk seekers, their preferred strategy in long planning horizons is likely to be riskier than that preferred by risk averters.

Indeed, the very idea of individual differences in risk propensity suggests that, at least in certain decision contexts, risk seekers tend to take more risks than risk averters. Mischel (1968) suggests that such decision contexts are weak situations as they have no strong or obvious contextual stimuli. Because of the limited impact
on the current situation, long term decisions represent such a weak situation (i.e., they are relatively neutral to current decision stimuli). Thus, dispositional factors will be more salient in long-range decisions. For example, while drinking and driving on a particular occasion entails short-range risk, taking up smoking involves long-range risk. While the former is more affected by the specific circumstance of the occasion (situational factors), the latter is less subject to immediate decision contexts (and more influenced by one’s own risk propensity). Thus, perceiving long-term risk to health, a risk-averter is less likely to smoke than a risk-seeker. Consequently, the dispositional attribute would tend to be more salient in long-range strategies. Thus:

Proposition 3: Decision makers who are risk averters will exhibit low-risk behaviour in long-range risk horizons.

Proposition 4: Decision makers who are risk seekers will exhibit high-risk behaviour in long-range risk horizons.

Hence, in summary, we have two further distinct contingent relationships. If the risk horizon is long-range, then irrespective of how the decision context is perceived (positive and negative), decision makers who are risk averters will exhibit low-risk behaviour, whereas decision makers who are risk seekers will exhibit high-risk behaviour. These risk behaviours are indicated in figure 1 as, respectively, (b) and (d) for risk averters, and (f) and (h) for risk seekers. At this stage of our exposition, then, it would appear that the individual disposition (i.e., risk propensity) is salient when the risk horizon is long-range. Hence, our additional partial response to the core issue is that ‘individual consistencies’ or dispositional characteristics are more important than ‘situational constraints’ when we have long-range risk horizons.

TEMPORALITY TWO: INDIVIDUAL FUTURE ORIENTATIONS

The above framework is not, however, quite complete. From an upper echelon perspective, we have not explored the psychological attribute that is decidedly relevant to risk horizons – namely, strategists’ personal cognition of future time, or individual future orientation (Das, 1986). Scholars suggest that the temporal orientations of decision makers have important consequences for the effective performance of organizational tasks. Studies show that not all planning horizons are appropriate for any particular organization – rather, there needs to be a fit between strategists’ future orientations and the organizational planning horizons (Das, 1986, 1987). Hence, the inclusion of the strategists’ future orientations should help remedy the above deficiency, enabling us to identify the appropriate planning horizons in strategic risk taking.

In the strategic management literature, the concept of ‘individual future orientation’ was first proposed and empirically studied with a large sample of senior business executives by Das (1986). Unlike the clock-and-calendar-time conception, individual future orientation refers to ‘the psychological conceptions of the future’ (Das, 1991, p. 51). The construct of future time perspective has been well established in the psychology literature (Cottle, 1976; Fraisse, 1963; Kastenbaum, 1961;
Klineberg, 1968). This psychological characteristic helps form one’s vision of possible futures, ranging from a near future to a distant future. Hence, decision makers can be categorized as having either a near-future orientation or a distant-future orientation. In strategic decision making, ‘it is the strategy making executives, through their perspective on the future time dimension, who eventually help constitute the specific temporal horizon of the organization’ (Das, 1991, p. 51). Executives with a distant-future orientation were found to prefer longer planning horizons, while executives with a near-future orientation preferred shorter planning horizons for the same activities in the same organization. If executives with a near-future orientation are forced to plan in a time horizon longer than their comfortable range, these plans would receive no managerial input of value, because these executives are incapable of conceiving such a distant future.

The critical distinction between future orientation and planning horizon should be obvious but is oftentimes unwittingly ignored. Future orientation relates to an individual’s internal attribute concerning the conception of the flow of time in the future – that is, in the future time segment. Thus, some individuals may grasp only a relatively short span of the future time segment, compared to other individuals who are capable of ‘seeing’ a more expansive terrain of the future time segment. Planning horizon, on the other hand, is what that individual considers as the length of time appropriate for engaging in certain activities (e.g., strategic planning) by an entity (such as an organization). (We use the terms ‘near-future’ and ‘distant-future’ to designate the polar values of the individual future orientation dimension, to clearly distinguish them from the conventional terms ‘short-range’ and ‘long-range’ for the planning horizon.) And, as alluded to in the preceding paragraph, the empirical findings are that indeed individuals differ both in their future orientations and in their preferences for appropriate planning horizons and, also, that the two are correlated in statistically significant ways (Das, 1986, 1987). Thus, in discussing risk propensity along varying risk horizons, it is important to examine the manner in which decision makers’ orientations to the future affect their risk behaviour.

INTEGRATING RISK PROPENSITY WITH TWO TEMPORALITIES

In this section we integrate risk propensity with the two temporalities (risk horizon and future orientation) just elaborated to develop a temporal contingency framework of strategic risk behaviour. The argument we make is that for those strategists who have a near-future orientation, long-range risk behaviour is unlikely to come into play. The reason is that such decision makers are simply incapable of perceiving risks residing in a distant future. These strategists would of course show their dispositional risk propensity in contexts with no known previous outcomes. But their long-range risk behaviour would not be very meaningful as they cannot seriously measure risk taking in extended planning horizons.

We may mention here the notion of ‘intrapersonal empathy gap’ (Loewenstein, 1996; Read and van Leeuwen, 1998), or one’s inability to imagine what it will be like in a state different from one’s current state. According to this notion, decisions regarding a future state (e.g., whether to have breakfast a week later) will be heavily influenced by the current condition (e.g., whether one is currently hungry). By our reasoning, a person who cannot ‘place’ herself in future states has a near-future
orientation. Such a person will bestow disproportionate weight to the current and short-term position in terms of gains and losses. Thus, people with a near-future orientation will tend to apply high discount rates, which makes decision making more impulsive and myopic (Bazerman et al., 1998; Loewenstein and Thaler, 1989).

A near-future orientation also suggests a lack of ‘mental accounting’ ability, as decisions and outcomes are framed in narrow terms and short-term choices are preferred (Thaler et al., 1997). Research shows that individuals differ in terms of their natural tendency and ability to engage in thought, or ‘need for cognition’ (Cacioppo and Petty, 1982; Cacioppo et al., 1996). Smith and Levin (1996) found that people with low need for cognition are more influenced by framing biases (or situational factors). Apparently, individuals who reason less would be more easily manipulated by the framing of a situation. Framing is important because the same situation may be described as either a gain or a loss position. We argue that a low need for cognition would be associated with a near-future orientation because thinking about long-term developments requires a relatively more pronounced ability to reason how things may unfold in the future. This association suggests that the framing of a situation (gain or loss) may well have similarly strong influences on people with a near-future orientation. Conversely, strategists with a distant-future orientation would be more likely to take long-range risk based on their risk propensity. Ordinarily, they would not feel adequately engaged in the making of strategic decisions that have relatively short planning horizons. Thus:

**Proposition 5a**: Decision makers with a near-future orientation will exhibit short-range low-risk behaviour, if the decision context is perceived as a gain position (positive context).

**Proposition 5b**: Decision makers with a near-future orientation will exhibit short-range high-risk behaviour, if the decision context is perceived as a loss position (negative context).

**Proposition 6a**: Decision makers who are risk averters will exhibit long-range low-risk behaviour, if they have a distant-future orientation.

**Proposition 6b**: Decision makers who are risk seekers will exhibit long-range high-risk behaviour, if they have a distant-future orientation.

Hence, in summary, we have two distinct sets of contingent relationships. First, decision makers – both risk averters and risk seekers – with a near-future orientation will exhibit short-range low-risk behaviour if the decision context is perceived as a gain position, and short-range high-risk behaviour if the decision context is perceived as a loss position. These are indicated in table I as, respectively, (a) and (e) for a positive decision context, and (c) and (g) for a negative decision context. It would thus appear that the decision context is salient when the individual has a near-future orientation. Hence, our further response to the core question is that the ‘situational constraints’ are more important than ‘individual consistencies’ or dispositional characteristics when we have near-future oriented decision makers.

Second, for decision makers with a distant-future orientation – irrespective of how the decision context is perceived (positive or negative) – those who are risk...
Averters will exhibit long-range low-risk behaviour, whereas those who are risk seekers will exhibit long-range high-risk behaviour. These risk behaviours are indicated in table I as, respectively, (b) and (d) for risk averters, and (f) and (h) for risk seekers. At this stage of our exposition, then, it would appear that individual dispositions (or risk propensities) are salient when the decision makers have distant-future orientations. Hence, our additional response to the core question is that ‘individual consistencies’ or dispositional characteristics are more important than ‘situational constraints’ when we have distant-future oriented decision makers.

The implication here is that it is critical to achieve a fit between the characteristics of top executives, including their risk propensities and future orientations, and the strategic orientation of a firm. Lewin and Stephens (1994) discussed the importance of matching organization–design variables, including strategy, control, and information processing, with individual characteristics of top managers (see also Finkelstein and Hambrick, 1996). The fit, in our framework, can be achieved through a careful selection of top management teams and developing appropriate planning horizons.

On the one hand, when the strategic orientation of a firm is towards long-range planning and risk taking, executives with a distant-future orientation and high risk propensity would be more effective. For example, Wiersema and Bantel (1992) found that personal traits of the top management team members affect a firm’s willingness to take risk and, thus, the degree of corporate change. In this case, because corporate change entails risk seeking and long-range planning, both distant-future orientation and high risk propensity would be valuable. Wally and Baum (1994) reported that top managers’ tolerance for risk influences the pace of decision-making in firms. Since a fast decision-making pace suggests risk seeking and short-range planning, the fit will be with top managers of a high risk propensity and a near-future orientation. On the other hand, planning horizons may be modified to fit the characteristics of top managers. Decision support techniques such as scenarios and linear models may be helpful here.

### Table I. Strategic risk behaviours based on risk propensity, decision context, risk horizon, and future orientation

<table>
<thead>
<tr>
<th>Risk propensity and decision context</th>
<th>Near-future orientation</th>
<th>Distant-future orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk averter and positive context (cell A of figure 1)</td>
<td>(a) Short-range low-risk behaviour</td>
<td>(b) Long-range low-risk behaviour</td>
</tr>
<tr>
<td>Risk averter and negative context (cell B of figure 1)</td>
<td>(c) Short-range high-risk behaviour</td>
<td>(d) Long-range low-risk behaviour</td>
</tr>
<tr>
<td>Risk seeker and positive context (cell C of figure 1)</td>
<td>(e) Short-range low-risk behaviour</td>
<td>(f) Long-range high-risk behaviour</td>
</tr>
<tr>
<td>Risk seeker and negative context (cell D of figure 1)</td>
<td>(g) Short-range high-risk behaviour</td>
<td>(h) Long-range high-risk behaviour</td>
</tr>
</tbody>
</table>

One of the most intriguing questions that remain unanswered today in the area of risk behaviour is concerned with the relative roles of dispositional and
situational factors. It has been so for several decades, but particularly since Kahneman and Tversky (1979) complicated matters by introducing a situational dimension in risk taking with their prospect theory. An integration of the two sets of factors is clearly needed, but a satisfactory solution is yet to emerge.

In suggesting an alternative approach by introducing the time dimension – we have perhaps further complicated the subject. In as much as risk is intrinsically embedded in time, the temporal dimension would seem to provide a meaningful way of clarifying and integrating various influences emanating from dispositional and situational characteristics. It appears to us that the temporal contingency framework of strategic risk behaviour proposed here should place us in a stronger position than before to respond to Kogan and Wallach’s (1967) basic question mentioned at the outset of this article – ‘How important are individual consistencies relative to situational constraints when it comes to predicting someone’s inclination for risk or conservatism?’ (p. 208).

Thus, the contribution of our proposed temporal contingency framework is to integrate two competing lines of research on the determinants of strategic risk behaviour by incorporating an important but largely ignored factor – the time dimension. The temporal dimension plays two distinct roles in the framework. In regard to the first role, the framework introduces the key concept of short-range and long-range risk horizons. This facilitates, we believe, a reconciliation of the competing influences of dispositional and situational factors. Previous research which seemed contradictory can now be reinterpreted contingently along temporal lines to yield a cogent picture. Both dispositional and situational factors exert their influences on strategic risk behaviour – but through different channels and with different saliencies. This first aspect of the temporal dimension is instrumental in providing us with a fairly clear divide – the short-range side is dominated by situational factors (perceived decision context), while the long-range side is influenced more by the dispositional risk propensity.

The second role of the temporal dimension incorporated in our framework is individual future orientations of the decision makers. The framework thus enriches our understanding of the significant role of strategic actors in terms of their personal attributes. Being temporally related to risk horizons, individual future orientations constitute a key predictor in our framework of strategic risk behaviour.

Indeed, since two of the three basic elements in the framework are psychological attributes, it would seem that a more comprehensive approach to exploring the subjective side of strategy making (Das, 1986) may well be justified by including other psychological factors that are potentially related to the perception of positive or negative decision contexts. A range of psychological variables are likely to be important in this respect, including (but by no means restricted to) the following: locus of control, tolerance of ambiguity, trust in people, need for cognition, and propensity to act. At the very least, the various propositions developed in the article should help in the empirical testing of the different contingent relationships in the temporal framework.

In sum, the temporal framework of strategic risk taking behaviour proposed in this article enables us to respond – both conceptually and empirically – to the insightful question of Kogan and Wallach (1967). We believe that we can now begin to answer the question about the relative importance of dispositional versus situational determinants in strategic risk behaviour by incorporating the two temporalities introduced here. The answer is fairly categorical, and takes a contingent
form – it depends on whether we are dealing with short-range or long-range risk horizons, and whether, also, the decision makers have near-future or distant-future orientations. The typology of strategic risk behaviours developed here, together with the accompanying propositions, should facilitate the empirical testing of the different contingent relationships identified within the temporal framework.

REFERENCES


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