

THE CREATION OF MOMENTUM FOR CHANGE THROUGH THE PROCESS OF STRATEGIC ISSUE DIAGNOSIS

JANE E. DUTTON

Graduate School of Business Administration, New York University, New York, New York U.S.A.

ROBERT B. DUNCAN

J.L. Kellogg Graduate School of Management, Northwestern University, Evanston, Illinois, U.S.A.

This paper presents a model of how decision-makers interpret strategic issues. The model of strategic issue diagnosis identifies three critical events: activation, assessments of urgency and assessments of feasibility. The relationship of each of these interpretive assessments to the creation of momentum for change allows one to predict if and how organizations will respond to a changed decision environment. The paper further links strategic issue diagnosis to organizational responses by highlighting the systematic effect of two contextual variables—the organization's belief structure and its resources—upon the assessments in diagnosis. In this way, the model of issue diagnosis provides a framework for understanding how and why organizations respond differently to strategic issues.

INTRODUCTION

In the wake of increasing economic adversity it is likely that organizations will be embedded in environments marked by hostility and scarcity. Recent concern with processes and structure under conditions of decline as opposed to growth (Ford, 1980; Harrigan, 1980; Hughes, 1982; Whetten, 1980) attests to the reality of these changing environmental conditions. Coupled with the increasing complexity and change in the domains of organizations (Ansoff, 1979; Tung, 1979; Makridakis and Wheelwright, 1981), environmental adversity confronts organizations and their decision-makers with a basic survival issue: how can organizational decision-makers learn to deal effectively with these changed environments?

Organizations elicit a vast array of responses to a changed decision environment. In some cases these responses are effective in the sense that they more correctly align the organization's internal structure or systems with the demands of the external environment. In other cases

the responses are less than effective and an opportunity fades or a problem intensifies.

Theoretical attempts to link different organizational responses to changes in a decision environment have been scanty at best. Research has tended to focus on the cases where organizations have failed to respond to a changed environment. Explanations have ranged from those which focus upon decision-making pathologies (Janis and Mann, 1977; Smart and Vertinsky, 1977), restrictive organizational norms (Argyris and Schon, 1978), structural impediments (Hedberg, Nystrom and Starbuck, 1976; Hage, 1980), information system deficiencies (Hedberg and Jonsson, 1978), to system-wide pathologies (Staw, Sandelands and Dutton 1981). With few exceptions these authors fail to provide an integrative mechanism for explaining how each of these different factors contributes to organizational responsiveness.

This paper proposes that a major reason organizations respond differently to changes in the environment involves how strategic issues are triggered and interpreted by decision-makers.

The term 'strategic issues' is used to describe developments or events which have not yet achieved the status of a decision event. The term *strategic issues* is used to highlight that the concern of this paper is on the developments and events which have the potential to influence the organization's current or future strategy (Ansoff, 1979; Dutton, Fahey and Narayanan, 1983). The triggering and interpretation of strategic issues is called strategic issue diagnosis (SID). Through the process of SID, changes in the decision environment are detected and interpreted. On the basis of these interpretations, forces are put into action which initiate or impede strategic change.

The focus on strategic issues and how they are processed answers the call for new, process-oriented treatments of strategy formulation and change (Fredrickson, 1983). The paper attempts to explicitly link findings generated in organization theory with the concerns of strategic management theorists, interested in the process of strategy formulation and its links to the external environment (Hofer and Schendel, 1978; Jemison, 1981; Quinn, 1980). In this way the proposed model of the strategic issue diagnosis process attempts to wed the concerns of organization theory and strategic management by showing how the early stages of the decision-making process, and the organizational context in which they take place, are systematically related to different levels and types of strategic change.

The process of strategic issue diagnosis helps to illuminate the strategic adaptation process by more clearly specifying the assessments involved in its anticipatory phase (Meyer, 1982)—when potential strategic problems or opportunities are being detected and interpreted by decision-makers. The activities which comprise this phase of adaptation are critically important for understanding how and when decision-makers in organizations intentionally respond to a changed decision environment. Strategic issue diagnosis initiates the response process by translating and focusing key environmental events into potential issues which are assessed by decision-makers. In this way, SID is part of the more general interpretive process where data confronting decision-makers are given meaning (Daft and Weick, 1984). It is proposed that the meanings formed in SID create the momentum for change through which forces for further adaptation are set into place.

The process of strategic issue diagnosis is labeled as such to distinguish it from the processes of problem-identification (Lyles and Mitroff, 1980), problem-sensing (Keisler and Sproull, 1982) or problem-solving, and to highlight the major interpretive component of the process. The process is more generalizable than problem-identification and problem-solving as it applies equally to the processing of opportunity as well as problem-initiated activities (Dutton, Fahey and Narayanan, 1983). Further, by applying the label of diagnosis to the acts of triggering and interpreting, one is not bound by the analytical rigor or logical sequencing implied by the process of problem-solving. Instead, the label of diagnosis imbues the process with an interpretive and judgemental component which more closely captures the interpretation of problem or opportunity strategic issues in organizations (Dutton, Fahey and Narayanan, 1983; Daft and Weick, 1984).

Strategic issues do not activate decisionmakers' attention in packaged form. Instead, the interpretations of key issues and how they relate to the organization are highly subjective. The strategic issue diagnosis process is one of social construction (Berger and Luckman, 1967), where alternative judgements of the meaning of an event are imposed, created and legitimated in a social context. As a result, contextual influences in the form of organizational beliefs and resources importantly affect the outcomes of SID in predictable ways.

As described here, strategic issue diagnosis takes place at the top levels of the organization, i.e. it is a critical activity that takes place within the dominant coalition (Hambrick and Mason, 1984). Although this paper focuses on strategic processes at the top of the organization, strategic decisions and allocations flow out of activities taking place at multiple levels of the organization (e.g. Bower, 1970; Burgelman, 1983).

The paper specifies the logic of strategic issue diagnosis in two distinct stages. In Part I the elements in the issue diagnosis process are outlined in simplified form to identify the key components and their interrelationships. In Part II, two aspects of the organization's context, i.e. the structure of the organization's belief system and the organization's resource supply, are discussed in terms of their impact upon strategic issue diagnosis assessments. Part I builds a model to allow one to predict how decision-makers

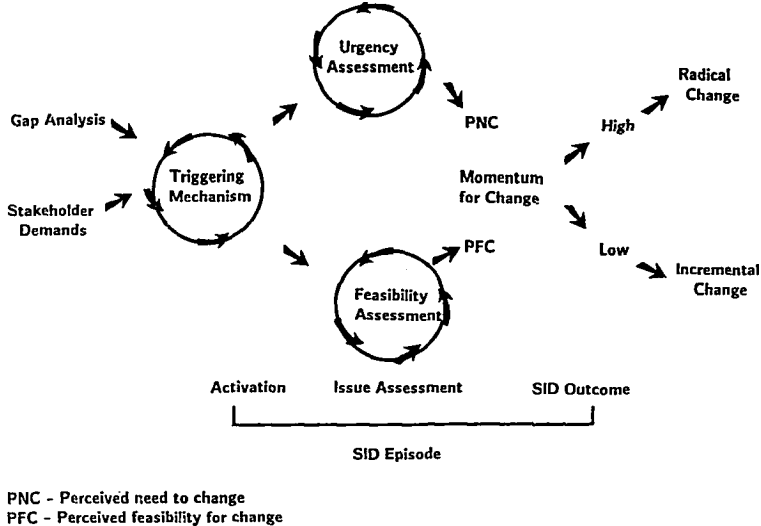


Figure 1. Strategic events in strategic issue diagnosis

respond to strategic issues. Part II builds a foundation for explaining why organizations respond differently to similar strategic issues. Where possible, key relationships are summarized in proposition form.

THE PROCESS OF STRATEGIC ISSUE DIAGNOSIS

This paper depicts strategic issue diagnosis as an iterative, cyclical process which involves two major events. The process is activated by the recognition of some type of strategic issue—an emerging development, trend or event which is potentially relevant to the organization's strategy. Assuming a strategic issue has been recognized, the model proposes that decision-makers endeavor to understand or interpret it. Issue assessment involves two major interpretations: (1) the urgency of taking action on the issue; and (2) the feasibility of dealing with the issue. On the basis of these assessments, momentum for change is created, and the forces for organizational responses are set into place. By understanding the assessments in strategic issue diagnosis and their relationship to organizational responses, one gains theoretical understanding of

how certain types of organizational change can be tied to these early stages of strategic issue diagnosis.

Each of the major events in strategic issue diagnosis—activation and issue assessments (urgency and feasibility)—is further explored below to capture the essence of the SID process. The next two sections describe each of the events and their interrelationships. In subsequent sections the influence of the organizational context is explored in terms of its impact on SID assessments. In this way organizational context is portrayed as having a major impact on organizational responses to changes in decision environments *through* its impact on issue activation or issue assessments.

The process of strategic issue diagnosis is depicted diagrammatically in Figure 1. The activation event is seen as preceding the two issue assessments. The arrows between the triggering mechanism and the issue assessments represent the ongoing possibility of issue recycling through any one of the SID events. The figure also illustrates that urgency and feasibility assessments build momentum for change, and determine whether decision-makers will favor incremental or radical responses to the strategic issue.

The activation of diagnosis (Event I)

During the process of strategic issue diagnosis, decision-makers actively engage in attempts to understand a particular strategic issue. The model begins with the activation of diagnosis, i.e. the process describing what and how issues are recognized and isolated for further consideration (Mintzberg, Raisinghani and Theoret, 1976).

Insights into how strategic issues are activated can be gleaned from a wide range of research endeavors including environmental scanning (Aguilar, 1967; Kafelas and Schoederbek, 1973), decision-making (Cyert and March, 1963; Mintzberg, Raisinghani and Theoret, 1976; Downs, 1967; Segev, 1976), problem-formulation or sensing (Keisler and Sproull, 1982; Lyles and Mitroff, 1980; Pounds, 1969), and normative models of strategic diagnosis (Nutt, 1979; Ansoff, 1979).

There is a marked convergence in these works that some type of perceived inconsistency or imbalance activates the change process (Miller and Friesen, 1980). At this point it is assumed that the costs of inaction are too high to forestall further consideration. Ansoff (1975) labels these events 'strategic surprises' which are 'sudden, urgent, unfamiliar changes in the firm's perspective which threaten a major profit reversal or loss of a major opportunity'. Mintzberg, Raisinghani and Theoret (1976) label these stimuli 'action thresholds'—where stimuli accumulate to such a point that the issue must be explicitly recognized and given further decisional attention. Triggering, then, is pivotal for subsequent strategic issue diagnosis activity. It serves to focus attention upon an issue which demands further scrutiny.

Strategic issue diagnosis can be triggered through formal or informal mechanisms. Some organizations utilize strategic issue management systems that are explicitly designed to identify emerging and consequential trends in the environment (King, 1982). Other organizations rely on much more intuitive, informal systems to surface strategic issues, e.g. a rumor emerges suggesting that a major competitor is making a move which dramatically shifts the competitive structure of the industry. Whether the system which generates a strategic issue is formal or informal, the signal which launches further attentional investment is information that the status quo has changed or will change, making current modes of operating

potentially ineffective, and consequently inappropriate.

A critical source of strategic issues are organizational stakeholders. Stakeholders are all those individual actors, parties, and organized groups and institutions that have bearing on the policies and actions of the organization (Mitroff, 1983; Rhenman, 1968). In fact, the formalization of stakeholder analysis as developed by Mitroff (1983) as a component of environmental scanning is one indication that decision-makers view these groups as important sources of strategic issues.

Other environmental analysis techniques can also be effective in identifying strategic issues. Wilson (1983) has identified the procedures and benefits of identifying environmental trends and their potential impact on the organization. Both Mandel (1983) and Naylor (1983) have detailed the role that scenario analysis can play in identifying future strategic issues for the organization, and identifying alternative ways the organization might respond to these various scenarios. Porter (1980) has also provided a framework for analyzing environments in his development of four generic industry environments (i.e. fragmented, emerging mature and declining). Klein and Newman (1980) have developed a technique called the Systematic Procedure for Identifying Relevant Environments (SPIRE) that is also very useful in environmental analysis. SPIRE provides a technology to identify strategically important environmental factors that either directly or indirectly have an impact on strategy formulation. All of these are examples of analytical techniques that are useful in the activation stage of diagnosis. These environmental analysis techniques will then help organizational decision-makers to better understand the pressure that organizations will face in the future. As a result, organizational decision-makers will be more able to anticipate what likely strategy or structure changes might be needed in the future (Lawrence and Dyer, 1983; Ansoff, 1984).

The perception that current actions are ineffective suggests that strategic issues are tied to an awareness of some real or anticipated performance gap) Downs, 1967, i.e. a discrepancy between desirable and actual or anticipated performance. Awareness of a real or potential gap may come about formally or informally as mentioned previously, but in either case a strategic issue emerges because of the recognition

of strategic performance implications. It is this link to strategic performance that acts as the initial sorting criterion in strategic issue diagnosis. In subsequent SID assessments, issues are further sorted into those that require different types of adaptation responses.

Issue assessments (Event II)

Assuming that diagnosis has been activated through the detection of some type of 'active' issue, decision-makers engage in attempts to diagnose the degree of issue urgency and feasibility. Both assessments are important in building decision-makers' interpretation of an issue and in creating the momentum for change in response to the issue. Issue urgency indicates the perceived cost of not taking action with respect to an issue, whether that action means resolving a problem or capitalizing on an opportunity (Miller, 1982). Issue urgency is a composite perception based on many judgements made about the nature of a strategic issue. Urgency captures the *perceived importance* of taking action on an issue. The greater the urgency of a strategic issue, the greater the perceived need to change the current state of affairs in the organization.

The greater perceived need to change arises because of pressures that are exerted by organizational stakeholders whose claims on the organization assure that it remains responsive to the larger environment (Mitroff, 1983). The presence of a threat that is not answered, or an opportunity that is not acted upon, induces stakeholders to apply pressures for action. In addition, at a more personal level, decision-makers' aspirations could be thwarted by not taking action on urgent issues. Thus, organizational and personal pressures motivate decision-makers to expend greater resources on issues having the highest estimated pay-off to the organization. It is this pay-off that is captured by the notion of urgency. The urgency of a particular issue serves to break down decision-makers' threshold of resistance to feedback information (Miles, 1980), increasing the probability that the issue will create momentum for change.

The urgency of a strategic issue derives from a number of salient dimensions of an issue, which draw the attention of decision-makers. The most important dimensions are those indicating how threatening the issue is to the survival of the

reigning dominant coalition. Concentrating on recent behavioral research, each of these critical dimensions is described below.

The perception of an issue urgency is tied to the perception of time pressure associated with an issue. *Time pressures* can arise from deadlines embedded in an issue, e.g. where an issue surrounding future competitors' actions is linked to a specific, time-bound regulatory action. Time pressure is also tied to estimates of anticipated issue duration. Where an issue is projected to endure, the issue is likely to be judged as more urgent. For example, seasonal fluctuations in sales and costs make certain types of performance issues temporary and natural 'in the course of business'. However, if the cause or impact of the issue is expected to endure beyond some critical threshold, it is likely that the issue will be judged as urgent. This tendency is illustrated by automobile producers' responses to oil shortage. In the early 1970s the oil crisis was viewed as a temporary condition and automakers continued to produce large-scale, fuel-inefficient cars (McGinnis, 1978). However, in recent years automobile manufacturers have made a pronounced effort to produce smaller, more compact models. Responsibility for this change in strategy is due, in part, to a change in interpretations of the cause of sales declines. Performance issues came to be viewed as more enduring given the perceived permanence of OPEC's actions and its effect upon the price of petroleum products.

Assessments of urgency also depend on the *visibility* of a strategic issue to important internal and external constituencies. The perceived visibility of an issue is related to the publicity surrounding the issue and the level of issue exposure to inside and outside groups. More visible issues are more urgent for several reasons. When viewed from a competitive standpoint, failure to take action on a visible issue implies an organization's competitive edge could be whittled away as competitors and rivals respond more quickly and effectively to an emerging opportunity. Sobel's (1984) historical analysis of the auto industry indicates how both Volkswagen and Japanese manufacturers responded to the growing small car market while the U.S. 'big three' ignored this trend. In fact, increased issue exposure creates pressure to take action, whether or not the action involves eliminating a threat or capitalizing on an opportunity. Where an issue

represents a threat of some type, its visibility raises the possibility of outcry or pressure for action from a wider range of the organization's internal and external stakeholders. Questions of legitimacy are raised, adding further momentum for action of some type. When U.S. auto executives began to perceive the increased demand for smaller fuel efficient cars in response to customer and government pressure, a momentum for change in the U.S. auto industry was heightened (Sobel, 1984).

A strategic issue may also be judged in terms of how responsible management believes it is for the issue's occurrence. Attributions of *responsibility* affect decision-makers' assessments of issue urgency in two competing directions. First, to the extent that decision-makers believe that the organization (as opposed to extra-organizational factors) is responsible for an issue, this responsibility attribution may increase perceived issue urgency. Ford Motor Company's admission of responsibility for the declining quality of their company's product represents a case where perceptions of responsibility increased the sense of issue urgency. The management at Ford publicly criticized their own quality standards and used this to explain the closing of one of their own plants (*Business Week*, 1980).

At the same time, attributions of internal responsibility for an issue—particularly if it involves a problem—enhance pressures to justify the appropriateness of past decisions, minimizing the severity of the strategic issue. The pressures for justification are most pronounced when single individuals or a group of individuals feel responsible for the problem (Staw, 1980). In this case, justification pressures may reduce judgements of issue urgency, thus reducing the perceived need for remedial change.

The perceptions that comprise assessments of urgency, as in judgements of responsibility described above, rely on causal analysis about an issue—its sources and its effects. Managerial beliefs are critical filters that act to screen in and screen out information relevant to an issue (Beyer, 1981). The role of organizational beliefs as filters and their link to SID will be considered systematically in a subsequent section.

Not all of these judgements are elicited in assessing the urgency of strategic issues. Instead, the salient dimensions of an issue draw the attention of decision-makers and have the most

pronounced impact on this judgement (Taylor and Fiske, 1978). For example, issue responsibility may be a salient concern to some organizations because the press or media have captured the attention of constituencies internal and external to the organization. In these instances issue responsibility becomes a critical factor in urgency assessments. In other cases, factors considered in judgements of urgency are dictated by historical precedent or routines that organizations employ to sort issues into active and inactive piles (Simon, 1957). For example, organizations using annual planning reports rely upon the financial data which are conveniently available from these reports to assess pressures to act on an issue. Assessments of urgency become a routinized output of the annual planning process. Thus the depiction of urgency suggested here is an expanded model of potential factors considered in such a judgement. In reality this assessment is likely to be simplified and routinized—requiring limited investment in time or the cognitive resources of decision-makers.

The output of the urgency assessment process is a subjective interpretation of the perceived need to change the organization in some way to resolve the apparent discrepancy. When urgency is judged as low, an issue becomes inactive and is given limited, if any, further decisional attention. However, if an issue is judged as urgent, a greater need to make changes to resolve it exists, demanding further consideration. The subsequent assessments involve feasibility estimates of the likelihood of successfully resolving the strategic issue.

Issue feasibility (Event III)

While the perception of urgency is one important component of diagnosis, defining and interpreting an issue also depends on judgements about the feasibility of taking action. Assessments of feasibility do not have to be made with respect to any particular alternative. In fact, at this stage in the choice process, specific alternatives and options may not have been generated by decision-makers. Rather, the model of strategic issue diagnosis proposes that decision-makers make gross judgements about the possibility of resolving an issue that systematically affect how an issue is interpreted. So, for example, if a strategic issue is identified that is familiar to one encountered in

		Perceived Understanding	
		Low	High
Perceived Capability	Low	POWERLESS	TRAPPED
	High	PERPLEXED	PROPELLED

Figure 2. Judgements in the assessment of feasibility

the past, e.g. a new technology is developed outside the organization that has the potential to revolutionize the organization's product mix, but decision-makers understand how to respond because they have faced a similar issue in the past, then the issue is more likely to be interpreted as an opportunity rather than a threat, and decision-makers would respond accordingly.

Two judgements are particularly important in forming a feasibility assessment: (1) perceived issue understanding; and (2) perceived issue capability. *Issue understanding* refers to the perception that decision-makers, with some effort, could identify the means for resolving the issue. *Issue capability* describes the perception that the means for resolving the issue are available and accessible. Note that both of these judgements can be made by decision-makers without having to assume that options for resolving the issue have been generated or evaluated. Instead, the SID model proposes that assessments related to the resolution of an issue enter the diagnosis phase of a strategic issue when the issue is still being defined and interpreted.

The judgements that comprise the feasibility assessment are described in more detail below. To simplify the discussion, the four combinations of perceived understanding and capability are represented by a 2x2 matrix in Figure 2.

In Cell I decision-makers are uncertain of the means to resolve a particular issue. In addition

there is a perception that the organization has neither the supply nor access to resources to resolve the issue. Decision-makers are powerless in the sense of lacking both the knowledge and means for issue resolution; consequently the issue will be interpreted as a threat. Consider the case of Chrysler Corporation and decision-makers' assessments of the feasibility of changing the situation which had caused the precipitous drop in financial performance in the late 1970s. Evidence from Chrysler's annual reports suggested that decision-makers perceived that consumer demand for their product was highly unpredictable.¹ In addition, they blamed their lack of control over government regulatory requirements for their continuing profit woes. Thus, in the case of Chrysler, although plummeting sales and market share during 1977-79 created a severe discrepancy in financial performance, decisionmakers saw the resolution of their situation as severely limited in feasibility without the assistance provided by a federal bail-out.

In Cell II, organizational decision-makers make a different set of judgements about feasibility constraints. Cell II describes the situation where strategic decision-makers believe they understand how to resolve the issue (high understanding), but do not have the resources or access to impact change (low capability). In essence decision-makers are trapped by their lack of capability for resolving the issue, although they understand what action(s) are required. This situation characterized the plight of American Motors Corporation in the late 1970s. Public statements by members of this firm suggested that consumer demand was viewed as highly predictable. However, AMC did not have the capital to quickly develop front-wheel drive, fuel-efficient cars (Sobel, 1984).

Cell III describes a different feasibility assessment. With high capability and low understanding decision-makers have the resources and access to affect change but believe they lack the understanding necessary to resolve an issue. While having the potential resources for resolving the issue, they are perplexed by their lack of

¹ A comparison was made of interpretations for financial performance for the 1977-79 period for General Motors, Chrysler Corporation, Ford Motor Company and American Motors Company, based upon an analysis of statements made in the annual reports. Further information in this pilot study can be obtained from the authors.

means-end understanding and are likely to view the issue as ambiguous and uncertain, delaying the taking of corrective action. General Motors characterized this situation in the mid-1970s. General Motors clearly had the resources and capability to enter into the small car market, but decision-makers' uncertainty about consumer demand created reluctance in terms of making a full commitment to small cars. The statement of a high-level executive at GM to one of the authors underlines this point: 'We can get the money to develop the new line of cars, but we just don't know what the customer wants—are Americans really serious about small cars?' In 1980, GM reached the conclusion that small cars were marketable and has made the 4-year \$40 billion commitment to retooling to produce their line of small cars.

In Cell IV, resolution of a strategic issue is perceived as most feasible. The resources and access to initiate change alternatives are perceived to be present, and decision-makers believe they have the knowledge necessary to understand what type of change is appropriate. In this case the issue will be perceived as an opportunity. The perceived high feasibility propels efforts to resolve an issue in the form of greater momentum for change. The situation does not imply that change is most effective when decision-makers find themselves in this cell. Rather, Cell IV captures the situation when change is most probable given its judgements about the high feasibility of change.

The importance of feasibility assessments to the process of strategic issue diagnosis is that interpretations of feasibility affect the definition of an issue and the adaptive responses of organizations. Where feasibility is perceived to be fairly low (Cell I and variants of Cells II and III), decision-makers may elicit a less venturesome response in terms of fully resolving an issue. In contrast, where perceived feasibility is high (Cell IV and variants of Cells II and III), judgements of greater understanding and capability facilitate consideration of a more radical change directed at resolving the strategic issue. In proposition form these arguments suggest the following relationship:

Proposition 1: *The more decision-makers perceive they understand a strategic issue and perceive the organization has the capability for*

dealing with the issue, the greater the momentum for change.

Translating the momentum for change into action

The major thesis of this paper is that diagnosis influences organizational action. The process by which this occurs is revealed by linking SID assessments to the momentum for change. Assessments of urgency and feasibility have implications for the momentum for change built in response to a strategic issue. The momentum for change refers to the level of effort and commitment that top-level decision-makers are willing to devote to action designed to resolve an issue. Where this level of effort and commitment is high, decision-makers are willing and motivated to consider radical responses to an issue.

One can conceptualize the range of potential actions taken to resolve a strategic issue as falling along a continuum ranging from modest, small-scale change (e.g. change in procedures, policies, lower-level managers, etc.) to far more extensive radical and dramatic changes (Miller and Friesen, 1980). Examples of these radical changes include modifications in organizational design (e.g. the recent redesign of General Motors (*Fortune*, 1984), as well as changes in strategy (e.g. Sears' entry into the financial services industry). Any one of these radical changes, whether taking place in a small, privately owned company or a large public corporation, involves a significant reshuffling of resources and beliefs, making them significant and time-consuming events.

Within the model of strategic issue diagnosis, the relationships between assessments of feasibility, urgency, momentum for change and action are illustrated in Figure 1. As the figure implies, where the momentum for change is low, less radical changes, such as changes in scanning procedures, goal levels (standards of desirability) and control systems are more likely. However, as the momentum for change increases, more costly and more risky changes are likely to occur, such as changes in organizational design or strategy. In a sense these latter types of changes represent fundamental innovations to the organizations initiating them (Hage, 1980), compounding the difficulties associated with their comprehension and implementation. A more precise specification of SID and the momentum for change

		Low	High
Assessments of Urgency	Low	NO RESPONSES	OPPORTUNISTIC RESPONSES
	High	COPING, OUSTING RESPONSES	REORIENTING RESPONSES
		I III	II IV

Figure 3. Interaction of urgency and feasibility assessment and their relationship to organizational responses

can be gained by considering the possible combinations of urgency and feasibility.

The interaction of urgency and feasibility

Thus far the discussion has implied that urgency assessments precede feasibility as the strategic issue diagnosis process unfolds. The linearity of the process has been maintained for analytical purposes only. In reality it is often the case that assessments of feasibility occur before urgency judgements. In fact various researchers have argued that judgements about the availability of solutions may serve to stimulate the detection of issues (Hewitt and Hall, 1973; March and Olsen, 1976; Starbuck, 1983). In these cases, feasibility is a forgone conclusion as a solution has already materialized. When this occurs, urgency assessments may be formed on the basis of the ease and timeliness of available solutions. Therefore, although the discussion implies that there is a specified ordering to these assessments, neither judgement necessarily takes precedence. As Figure 1 suggests, the outcomes of each assessment contribute uniquely to developing a momentum for change.

There are infinite combinations of urgency- feasibility assessments. To simplify the discussion of their interaction, four combinations of assess-

ment outcomes are represented in a 2x2 matrix in Figure 3. The cells show the link between assessments in strategic issue diagnosis and organizational responses. At a more general level these examples help to disentangle the relationship between interpretations and actions in organizations.

Cell I

Cell I represents a case when the strategic issue is inactive and decision-makers are unconcerned with its resolution. Where an issue is judged as not urgent and its resolution is perceived as infeasible, impetus to take action is absent, and the momentum for change is extremely low, if it exists at all.

Cell II

A strategic issue diagnosis episode may produce an outcome where the issue is judged as feasible to resolve, but it is not viewed as urgent. In this case it is likely that change will occur, but not very rapidly. The change is more likely to be incremental than radical (Miller and Friesen, 1980; Tushman and Romanelli, 1985), although the magnitude of the change will depend upon the level of available resources and understanding of decision-makers. For example, an acquisition candidate may come to the awareness of decision-makers which looks extremely attractive. Suddenly an opportunity has materialized which was not anticipated. Although an acquisition was not part of the competitive strategy, its perceived feasibility may induce consideration of a strategic change. In fact, as decision-makers ponder this possibility, it is likely that the disturbance will be judged as more urgent. Within this cell the momentum for change is derived from the perception of issue feasibility. Given this source of momentum, it is likely that Cell II pertains to opportunity as opposed to problem-initiated issues, and correspondingly generate opportunistic, yet incremental, responses.

Cell III

An organization has several options if a strategic issue is viewed as urgent, but infeasible to solve. These options include: (1) ignoring or minimizing the issue; (2) adjusting current scanning/monitor-

ing or control mechanisms; (3) more intensive search; (4) preparing to defend against the change; or (5) ousting the decision-makers. The first response represents a coping response directed toward eliminating evidence that an issue exists. If a strategic issue is ignored or its impact is minimized, it is given little, if any, further decisional attention. In essence this resolution option means that the issue becomes inactive and diagnosis activity ceases.

Decision-makers may also choose to alter the type of information which is collected by changing the organization's scanning, monitoring or control systems. These change alternatives eliminate the strategic issue by altering its implications for strategic performance. The underlying cause of the strategic issue is not eliminated, but the symptoms indicating its existence are minimized.

The changes which result from assessments of low feasibility represent incremental adjustments in current operations which seem to minimize the impact of a strategic issue. The changes considered by decision-makers represent coping attempts, but ones which will most likely fail to bring about any radical response or change. When strategic issue diagnosis produces this sort of outcome, change responses may do more harm than good. If a strategic issue persists, yet its resolution is perceived as infeasible by organizational decision-makers, pressures for justification and retrospective rationality may ensue (Staw, 1980). Under these conditions decision-makers may engage in a more intensive search to confirm the existence of the issue. Alternatively, they may selectively attend to information which confirms the correctness of past decisions in attempts to erase evidence that change is required.

The perseverance of an urgent strategic issue coupled with the perception of infeasible resolution contributes to the crisis-like character of a decision situation. Information processing becomes distorted (Smart and Vertinsky, 1977), evidence of groupthink pathologies emerges (Janis, 1972), and decision processes and outcomes become more rigidified (Staw, Sandelands and Dutton, 1981). If this occurs, decision-makers are likely to try and defend against the change as a reactive move to minimize its impact.

The persistence of a crisis-like situation without resolution begins to dismantle the base of legitimacy upon which top decision-makers' auth-

ority rests. As legitimacy is questioned the probability that decision-makers will be replaced increases over time. Thus another possible response to a situation of high urgency and low feasibility is the ousting of top management. In fact, studies of management (e.g. Gamson and Scotch, 1964; Allen, Panian and Lotz, 1979) and organizational turnaround strategies (e.g. Schendel, Patton and Riggs, 1976) provide support for this relationship. However, further studies suggest that the forces to replace management in the wake of urgent and infeasible issues may be tempered by the distribution of ownership in the firm (Salancik and Pfeffer, 1980).

Cell IV

The case where a strategic issue is viewed as urgent and change is perceived as feasible results in a final set of change responses. In this cell, issue diagnosis is hypothesized to create the greatest momentum for change. Where high perceived feasibility exists, decision-makers will consider more radical changes involving reorientations (Normann, 1977; Tushman and Romanelli, 1985) for alleviating the present strategic issue. These reorientations may involve reformulations of the organization's strategy that alter the means utilized to reach the organization's goals, or the nature of the goals themselves. Alternatively, these orientations may involve major changes in the organization's design as attempts to realign the organization with new environmental conditions.

A recent study of university responses to changes in federal regulations provides some support for this relationship (Ottensmeyer, 1982). The research suggests that the most radical actions to impact the regulation were made by universities when the impact of the regulation was viewed as great (high urgency), and actions taken to impact the regulatory process were viewed as politically efficacious (high feasibility).

In summary, assessments of urgency and feasibility act in concert to create the momentum for change in response to a particular strategic issue. Where momentum for change is greater, decision-makers are more willing to consider radical as opposed to incremental change. This relationship is expressed in the following proposition:

Proposition 2 The more a strategic issue is diagnosed by organizational decision-makers as urgent and feasible to resolve, the greater the momentum for change, and the more radical the change outcome.

CONTEXTUAL INFLUENCES

The model of strategic issue diagnosis described above suggests that the process takes place in a sterile and objective environment removed from the beliefs, resources and commitments of the organization. However, each diagnosis episode is closely related to the context in which it takes place, and in particular to the organization in which the episodes occur. The purpose of this section is to propose that organizational factors affect how strategic issues are diagnosed. Organizational characteristics affect diagnosis assessments in systematic ways. In this way the strategic issue process provides a theoretical rationale for why organizations respond differently to similar strategic issues.

This section highlights two organizational characteristics which act upon strategic issue events. The discussion focuses on the role of the structure of organizational beliefs and the availability of resources in strategic issue diagnosis assessments. However, the discussion only begins to capture the complexity of social, economic, and political forces at work in the creation of momentum for change. By outlining these factors the discussion reveals the subtle yet profound influence of beliefs and resources on adaptation *through* their effect on strategic issue diagnosis.

Organizational beliefs

Organizational beliefs represent shared understandings about the relationships between objects, properties and ideas (Sproull, 1981). Particularly relevant for strategic issue diagnosis are the beliefs used by decision-makers to interpret situations and to make judgements about feasible courses of action. Recent research suggests that three categories: (1) beliefs about risk preference; (2) beliefs about self-sufficiency, and (3) vision of distinctive competence (Donaldson and Lorsch, 1983) are important. These shared understandings act as filters through which management perceives the realities facing the firm (Donaldson and

Lorsch, 1983:79), and thus they critically influence interpretations made in SID episodes.

Miles and Snow (1978) have perhaps come the closest to articulating how organizations vary in terms of beliefs. They argue that there are three major sets of beliefs about the nature of management which correspond to three dominant schools of management thought: the traditional model, human relations model, and human resources model. They argue, further, that different strategic types—analyzers, prospectors, reactors and defenders—have different sets of dominant beliefs. Although their results are preliminary, initial studies indicate that defender and reactor organizations tend to share traditional and human relations beliefs, while analyzers and prospectors tend to hold beliefs more consistent with the human resources school (Miles *et al.*, 1978). One interpretation of this find is that organizations vary in terms of the range and diversity of beliefs about the nature of management, and that these beliefs are compatible with some strategic stances and incompatible with others.

Two characteristics of the structure of belief—their complexity and the level of consensus—are particularly important in determining the activation of SID, the urgency and feasibility assessments and the resulting momentum for change. Belief complexity captures the breadth and variety of factors which are present and legitimate in a particular belief system (Brunsson, 1982).

Organizations also vary in the level of consensus over the content of these beliefs. Organizations which possess a homogeneous group of actors, have enjoyed a history of frequent and continuous success, or face a clear and identifiable threat there is likely to be a high degree of consensus over the content of beliefs. Each of these factors acts to solidify beliefs, increasing the level of agreement over their content.

Conceptually, levels of belief consensus and belief variety are independent dimensions of an organization's belief structure. In reality, however, the two dimensions are closely linked. Where organizational beliefs are simple and unvaried, consensus is easier to achieve and is sustainable over time. However, where beliefs are highly varied and complex a high level of agreement over the broader domain is more difficult to achieve. For clarification purposes

these two dimensions of the belief structure organization can be combined into a single characteristic labeled belief differentiation. Where beliefs are highly varied and lack consensus, beliefs are highly differentiated. Where the beliefs are highly similar and consensual, then the belief structure is integrated.

The purpose in clarifying the meaning of this organizational characteristic is to enable a more precise specification of how belief structure impacts activation and feasibility assessments during issue diagnosis. It is proposed that a more differentiated belief structure in an organization increases the frequency of issue triggering and increases the probability that change will be perceived as feasible, in turn increasing the momentum for change.

If an organization has a highly differentiated belief structure, a more diverse set of performance expectations and results are considered legitimate during assessments of performance. Where this diversity exists more strategic issues are likely to be detected, further increasing diagnosis activity.

Returning to the research of Miles and Snow (1978), this argument suggests that analyzer organizations, holding the most varied and least consensual beliefs about management, would experience the most frequent triggering of strategic issues. Where this strategic type contains managers who believe in attending to detail and in delegating to others, they will be receptive to a wider range of issues than if either belief was advocated alone. Using this argument, the differentiation of beliefs determines the range of indicators to which decision-makers are sensitive, affecting the frequency of triggering of SID,

Yates' (1983) analysis of the American automobile industry provides an excellent example of the effect of belief differentiation on issue diagnosis. Yates points out that automobile executives lived in cultural isolation in Detroit from the non-automobile society. They lived, played and worked and thought together generating an *esprit de corps*, but isolated themselves from broader insights in contemporary society (Yates, 1983: 80). Translated into the SID model, there was less opportunity in the auto industry for issue triggers as decision-makers were exposed to singular, highly consensual views of the world.

Although the impact of organizational beliefs on urgency assessment is unclear, one can visualize a clear link to interpretations of feasi-

bility. Where beliefs are highly differentiated the feasibility of change is increased as multiple bases for understanding how to resolve an issue are available during diagnosis. The existence of diverse views that contribute to the identification of feasible alternatives, however, is likely to delay the change process. If one assumes that agreement must be reached before change can begin, then the diversity of beliefs makes general agreement more difficult to achieve, delaying the change process.

The variety of ideas or beliefs applied to an issue increases the probability that the issue will be perceived as feasible to resolve, in turn raising the momentum for change. In fact this relationship may be one reason why organizations with more organic structures are associated with more frequent and rapid change (Lawrence and Lorsch, 1967). A more organic design is marked by greater differentiation of beliefs which translates into more frequent recognition of new strategic issues and greater perceived feasibility of change. The relationship between the belief structure of an organization and SID is summarized in the following propositions:

Proposition 3: The more differentiated an organization's belief structure (lower consensus and more complex), the more frequently strategic issue diagnosis will be triggered.

Proposition 4: The more differentiated an organization's belief structure, the greater the perceived feasibility of change, and the greater the momentum for change.

Organizational resources

The supply of organizational resources also influences the outcomes of issue diagnosis. For example, an organization which has experienced a prolonged and rapid success builds a resource cushion which insulates decision-makers from the spur to action of performance-related strategic issues. In essence the organization experiences the 'fat cat syndrome' when resources are bountiful. Although slack resources may protect organizations from cyclical or minor vacillations in performance, this same slack can be dysfunctional in certain cases. Abundant resources can act to absorb performance shocks such that decision-makers become impervious to key

changes occurring internally or externally to the organization (Cyert and March, 1963).

The supply of resources built by continued organizational success promotes 'illusions of invulnerability' in the minds of decision-makers. Although the researcher who coined this phrase was referring to a group process under stress (Janis, 1972), these illusions can result from a pattern of continuous and rapid success at the organizational level (Starbuck and Hedberg, 1977). This illusion, in turn, encourages decision-makers to underestimate the magnitude and immediacy of a strategic issue, while at the same time magnifying perceptions of understanding and capability. Success-related illusions have been known to create disastrous results when organizations diversify outside the areas in which the success was made: 'The most difficult situation is one in which the previous success is so complete that the world is viewed through glasses polished in the previous incarnation' (*Business Week*, 1981: 61).

While a resource base which is too abundant has one set of consequences for strategic diagnosis, a limited resource base has another. A restricted resource supply may reduce perceptions of feasible issue resolution. Viewed in this light, an organization may become locked into current patterns of responses not because they have become routine and habitual, but because the issues are perceived as non-resolvable due to a resource shortage. The organization requires some minimal level of resources to successfully consider or implement change (Hedberg, 1981).

A restricted resource base acts to inflate assessments to urgency. Without a resource cushion to isolate decision-makers from minor performance deviations, the importance of each disturbance is magnified, increasing the perceived need for change. At the same time hopes of resolving the discrepancy are dampened as the organization's resource capability is limited. In addition, a restricted resource supply restrains the level of knowledge and expertise which can be devoted to comprehending any given strategic issue. Consequently, the perceived feasibility of change is further constrained through a restriction in the level of perceived issue understanding.

As the previous discussion implies, the resource base of the organization has a mixed impact on the outcomes of strategic issue diagnosis. On the one hand, greater resources promote change

momentum by increasing the perceived feasibility of change. On the other hand, a larger resource base discourages change by depressing issue urgency. These conflicting effects of resource base on the perceived momentum for change are captured in the following propositions.

Proposition 5: The greater the supply of organizational resources, the less the perception of urgency, the less the perceived need to change and the less the momentum for change.

Proposition 6: The greater the supply of organizational resources, the greater the perceived feasibility of resolving an issue, and the greater the momentum for change.

CONCLUSIONS

The strategic issue diagnosis process is a critical and relatively poorly understood element of strategic decision-making (Dutton, Fahey and Narayanan, 1983; Mintzberg, Raisinghani and Theoret, 1976). This paper attempts to fill this gap by proposing a model of the critical events in the SID process. The model suggests that the process is triggered through the recognition of performance consequences of an emerging development or trend that captures the attention of decision-makers. Attention is captured by the actions of stakeholders, outputs of scanning or issues management systems, and a variety of other attention-focusing actions.

Once SID is triggered the model proposes that urgency and feasibility assessments are made that help to apply meaning and definition to an issue. These assessments rely on a number of subjective judgements about the issue (e.g. its visibility, immediacy, etc.), and the organization's relationship to the issue (e.g. responsibility for the issue's occurrence, understanding of how to resolve it, etc.).

By specifying the wide range of judgements that enter these two assessments, the complexity of the SID process becomes clear. In addition, one easily appreciates the possibility of disagreement and conflict over the meaning of a strategic issue, and how the seeds for a political decision process are planted very early—when issues are first diagnosed (Allison, 1971; Narayanan and Fahey, 1982).

This paper also presents an effort to link a key phase of strategic decision-making, i.e. strategic issue diagnosis to organizational outcomes; i.e. adaptation. In particular, the paper proposes a model of the key events which take place during the strategic issue diagnosis—when vague, ill-defined events are interpreted by top-level decision-makers. The model of strategic issue diagnosis suggests that by understanding the assessments in SID and their interaction, one can predict the magnitude and type of change which an issue initiates. In this way the paper constructs a link between interpretive activities of top-level decision-makers and organizational change.

The model goes one step further, however, in trying to link decision activity and the nature of organizational adaptation. It suggests the differences in an organization's belief structure and level of resources have systematic influence on organizational adaptation. In this way strategic issue diagnosis is the pivotal activity through which beliefs and resources affect organizational change. These relationships, in turn, build the foundation for predicting why organizations respond differently to strategic issues.

From this link one can begin to disentangle how organizational differences relate to the process of strategy formulation and change. For example, the model helps our understanding of why organizations with prolonged periods of performance success have less radical responses to a changed decision environment than organizations which have not experienced this success pattern. The resource slack and undifferentiated beliefs which result from successful performance depress the probability of issue-triggering and perceptions of issue urgency and feasibility, building barriers to organizational change. The American automobile industry's failure to identify the need to develop small, fuel-efficient cars in the late 1960s and 1970s is a clear example of this situation (Yates, 1983; Sobel, 1984).

The links between interpretive activities in strategic issues diagnosis and organizational change raise challenging new research opportunities. The propositions can be tested in the context of tracing how organizations within a changing market environment identify strategic issues and how these diagnoses translate into strategic choices that represent varying degrees of radical change. For example, the American automobile industry provides an opportunity to examine how

organizations in the same market environment adapted differently, based on their diagnosis of strategic issues. Validation or falsification of the propositions would help to illuminate the boundaries operating on strategic choice in organizations. Where support for the propositions is upheld, it lends credibility to the view that strategic choices have consequence for organizational action (Child, 1972).

The model presented here extends recent work on the role of cognition in strategic management (Barnes, 1984; Chittipeddi and Gioia, 1983; Ginter and White, 1982; Schwenk, 1984). It presents a model which explicitly captures how the organizational context (i.e. beliefs and resources) influences strategic change. In this extension it illustrates how organization theory helps to uncover the role of the structural and strategic context (Burgelman, 1983) in influencing the processes underpinning strategic change.

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