

Hospitals as Interpretation Systems

*James B. Thomas, Reuben R. McDaniel, Jr.,
and Ruth A. Anderson*

In this study of 162 hospitals, it was found that the chief executive officer's (CEO's) interpretation of strategic issues is related to the existing hospital strategy and the hospital's information processing structure. Strategy was related to interpretation in terms of the extent to which a given strategic issue was perceived as controllable or uncontrollable. Structure was related to the extent to which an issue was defined as positive or negative, was labeled as controllable or uncontrollable, and was perceived as leading to a gain or a loss. Together, strategy and structure accounted for a significant part of the variance in CEO interpretations of strategic events. The theoretical and managerial implications of these findings are discussed.

The shift from high growth to low growth in the health care industry, with increased incentives for hospitals to contain costs and provide services as efficiently as possible (Cisneros 1986; Smith 1988), has caused hospitals to recognize and deal with strategic issues (Blair and Whitehead 1988). This has had to take place even though strategic thinking is a relatively new concept for hospitals (Hein and Glazer-Waldman 1988). In this environment, interpretation of strategic issues by the chief executive has become central to a hospital's success (Shortell, Morrison, and Robbins 1985) because this level of issue interpretation is the key factor that drives strategic action (Files 1988; Daft and Weick 1984). For example, confronted with the same strategic issue (e.g., a physicians' strike), different chief executives will often perceive the situation differently (Meyer 1982). Some chief executives may

Address correspondence and requests for reprints to James B. Thomas, Ph.D., Assistant Professor of Management, Department of Management and Organization, 403 Beam BAB, Pennsylvania State University, University Park, PA 16802. Reuben R. McDaniel, Jr., Ph.D. is Tom E. Nelson, Jr. Regents Professor of Management at the University of Texas at Austin; and Ruth A. Anderson, Ph.D. is Assistant Professor of Nursing at the University of Texas at Austin.

interpret the issue as a threat leading to negative consequences and act accordingly; others may interpret the same strategic issue as an opportunity for economic gain and positive growth.

These differences in interpretation of the same strategic issue have been attributed by some to different personal styles and practices of top managers (e.g., Hogarth 1980). Others have attributed some of the differences in chief executive interpretations to the context within which the top manager works. These predominantly theoretical efforts at understanding the link between context and the strategic interpretation process include attention to hospital characteristics such as strategy (Daft and Weick 1984) and structure (Knight and McDaniel 1979).

The purpose of our research is to move beyond this theoretical work by empirically testing the nature of the relationship between organizational context and hospital managers' interpretation of strategic issues. Specifically, this article explores how the strategy and the information-processing structure of the top management team in each of 162 hospitals are related to the labels applied to a strategic issue by the hospital's chief executive officer (CEO).

Interpretations may be affected by the strategy the hospital pursues (Daft and Weick 1984), because the prevailing strategy may cause certain relationships to go unnoticed, be ignored, or be overemphasized (Miles and Snow 1978). The strategic interpretations that take place in hospitals may also be influenced by information-processing behavior (Knight and McDaniel 1979; Weick and McDaniel 1989), because the way a top management team is structured to process information about strategic issues may limit or enhance recognition of strategic issues, impede the search for data, or mute causal relationships associated with an issue (Duncan 1974). If we can understand how these characteristics influence the interpretation of strategic issues in hospitals, we can then suggest guidelines for improving strategic interpretation processes.

THEORETICAL FRAMEWORK

HOSPITALS AS INTERPRETATION SYSTEMS

Strategic decision makers in hospitals are concerned with interpreting situations that have potential strategic implications for their organization. These interpretation efforts include attempts to give meaning to ambiguous events (Braybrooke 1964), to fit incidents into some structure of understanding (Weick 1979), and to recognize possible strategic implications (Thomas 1988). These interpretation activities of CEOs

are critically important because they help to determine the future behavior of the hospital as it attempts to gain a competitive advantage in its environment. Therefore, an understanding of those factors that affect CEO interpretations of external and internal events is required in any attempt to understand strategic action, organizational change, or learning (Dutton, Fahey, and Narayanan 1983).

Different descriptions of interpretation are found in the literature on management and organizational theory. Concepts such as sense-making (Weick 1979), problem formulation (Lyles and Mitroff 1980), issue diagnosis (Dutton, Fahey, and Narayanan 1983), and problem structuring (Cowan 1986; Abulsamh, Carlin, and McDaniel 1990) all describe the process by which decision makers interpret strategic events. Third party payers, state governments, insurance companies, industrial corporations, and the federal government have combined to force hospitals to confront strategic issues. From an interpretation perspective, the critical issue is how hospitals have organized to interact with this new environment. Information must be obtained, filtered, and processed in order to make choices possible in confronting action alternatives (Daft and Weick 1984). Ways in which this is accomplished and the factors that affect this process are key topics for explaining hospital behavior.

STRATEGIC ISSUE INTERPRETATION

Strategic issues are those trends, developments, or dilemmas that affect the hospital as a whole and its position in the environment (Egelhoff 1982; Ottensmeyer and Dutton 1989). These issues affect a hospital's ability to survive and prosper. Strategic issues are ill structured, often unique, and frequently ambiguous (Lyles 1981), requiring some form of interpretation (Mintzberg, Raisinghani, and Theoret 1976).

In attempts to account for different interpretations of the same strategic issues, one explanation is that individual managers have different information-processing styles, abilities, and knowledge structures, and that they interpret information differently according to these individual characteristics (Hogarth 1980; Ramaprasad and Mitroff 1984). The thrust of this explanation is the notion that what one knows influences what one can know. Another explanation, given by Hall (1984), suggests that interpretation is guided by the existing characteristics of the organization, which embody the hospital's memory of cause-effect relationships, procedures, solutions, and orientations.

Shortell, Morrison, and Friedman (1990) suggest that a number of organizational characteristics, such as mission, past performance,

and current strategic orientation, play a role in the interpretation of strategic issues. In terms of mission, for example, a religion-affiliated hospital may view strategic issues involving the provision of care to the medically indigent in ways very different from those of non-religion-affiliated hospitals. Further, past performance that has been successful may lead to complacency or inertia that can result in an "overestimation" of the hospital's ability to deal with a particular issue.

Labels, which often represent the interpretation or meaning attributed to stimuli, can capture beliefs regarding the potential effects of environmental events and trends (Edelman 1977). For example, strategic issues may be labeled as controllable or uncontrollable, as potentially positive or negative in consequence, or as leading to potential gains or losses (Dutton and Jackson 1987). Labels are important because they direct behavior (Fredrickson 1986). Differences in the way strategic issues are labeled by CEOs may help explain why two hospitals act differently when given the same objective data. Labels guide responses to strategic issues by establishing predictable processes that move the hospital in a specific direction (Starbuck 1983). For example, hospital CEOs that label strategic issues as "uncontrollable" may be inclined to change their hospitals internally to gain a competitive advantage, while hospital CEOs that label strategic issues as "controllable" may attempt to effect change in the external environment to gain a competitive advantage (Dutton and Jackson 1987). Research on the relationship between interpretation and action includes the findings that (1) issues labeled as having expected negative consequences for the organization lead to an increase in the hospitals' information search and analysis (Fredrickson 1986); and (2) gain/loss labels influence the amount of resources decision makers commit to a specific project (Staw and Ross 1978).

Information processing is a key concept for explaining why certain organizational characteristics are related to the labels applied by hospital CEOs to strategic issues. Organization-level information processing is defined as the gathering of data, the transformation of data into information, and the communication and storage of information for use in strategic decision making (Galbraith 1973; Egelhoff 1982). Organizational characteristics influence the gathering of data, guide attention toward some data and not other data, influence the transformation of data into strategic information, and therefore affect the way strategic issues are labeled.

HOSPITAL STRATEGY

Strategy is the pattern discernible in a stream of important decisions about the domain in which a hospital has chosen to perform (Miles 1982). This pattern defines the hospital's relationship to its task environment. It consists of decisions about which products/services to supply, about selecting the market for those products/services, and about the particular administrative steps required to implement such decisions. Two general strategic patterns that hospitals may follow are described by Miles (1982) as domain defense and domain offense.

Domain Defense

Domain defense-oriented hospitals choose a position in the environment and attempt to defend that position. A domain defense-oriented hospital will protect its market niche against losses at all costs. It will, therefore, direct information processing toward maintaining its traditional product line. A domain defense-oriented hospital does not perceive a need to process information regarding new products/services or strategy reformulation. These characteristics are very similar to those that describe a "defender" hospital (Miles and Snow 1978; Shortell, Morrison, and Friedman 1990) in that both domain-defensive and defender hospitals concentrate their search and analysis of information on a small set of stimuli that will help improve productivity and the quality of the chosen product lines. Because they attempt to create a competitive advantage through close attention to their own efficiency and through internally directed action (Thompson 1967), they likely see strategic issues from a pessimistic viewpoint.

Domain Offense

Domain offense-oriented hospitals are essentially the opposite of domain defense-oriented hospitals in terms of their strategic postures. Domain offense-oriented hospitals will constantly seek new product and market opportunities, striving to be pioneers in the industry. A domain offense-oriented hospital will search for and process information indicative of areas where it can expand its product/market offerings. This is similar to a "prospector" strategy (Miles and Snow 1978; Shortell, Morrison, and Friedman 1990) in that both strategies attempt to create a competitive advantage through close attention to the environment and through externally directed actions. Therefore, they are more likely to see strategic issues in a favorable light. It is hypothesized that:

- Hypothesis 1a.* The extent to which a hospital is more domain offense-oriented will be positively related to the extent to which a strategic issue is labeled as "positive."
- Hypothesis 1b.* The extent to which a hospital is more domain offense-oriented will be positively related to the extent to which a strategic issue is labeled as a "gain."
- Hypothesis 1c.* The extent to which a hospital is more domain offense-oriented will be positively related to the extent to which a strategic issue is labeled as "controllable."

TOP MANAGEMENT TEAM INFORMATION PROCESSING

The hospital's top management team is the decision unit that identifies and addresses strategic information. The information-processing structure of this team creates the channels along which strategic information will flow and defines the team's capacity to acquire, interpret, and communicate a given amount of information within a given time period (Galbraith 1973). The information-processing structure of the top management team can be described by (1) the degree to which the team's members participate in strategic decision making, (2) the degree to which strategic decision making is formalized, and (3) the degree of interaction among the team's members (Duncan 1974).

Participation

More participation in decision making by members of the decision team increases the number and variety of information processors, thus increasing the total information-processing capacity (Ebert and Mitchell 1976; Ashmos 1990). Groups possess greater amounts of information than do individuals and will, therefore, be better at making decisions that require the use of knowledge (Maier 1967). It is expected that increased participation will increase the number of variables considered, the number of possible cause-and-effect relationships suggested, and the number of possible outcomes that potentially will result from strategic action.

Formalization

Formalization means the specification of behaviors in advance of their execution through the use of rules, programs, and standard operating procedures (Galbraith 1973). Formalization is best applied in situations of low uncertainty where issues that arise are anticipated and well understood, and where information is routine. The ill-structured nature of strategic issues, however, requires the processing of nonroutine information; therefore, rules, programs, and procedures do not provide sufficient direction for decision making. High formalization will limit the number of variables considered, the number of possible cause-and-effect relationships suggested, and the number of possible outcomes that might result from strategic action.

Interaction

Interaction among the strategic decision makers may occur both within and outside of formal group settings and will increase the amount of information processed (Duncan 1974). Variables and cause-and-effect relationships are brought together in new ways through informal networks. Reliance on informal networks increases when nonroutine information processing is required (Galbraith 1973). This informal interaction, combined with the free and open exchange of information, increases the capacity of the information-processing structure.

Because they have more ability to control and coordinate critical elements without experiencing information overload, hospitals with high information-processing capacity are more likely than hospitals with low information-processing capacity to label strategic issues in a favorable light. More participation, less formalization, and higher levels of interaction among unit members are structural characteristics that enhance information-processing capacities and hence reduce perceived uncertainty (Duncan 1974). Strategic-decision units characterized by these uncertainty-reducing mechanisms believe that even the most turbulent environments contain positive elements that will lead to potential gains (Smart and Vertinsky 1984), and perceive an ability to control the environment through externally directed actions (Cook et al. 1983).

When there is low participation, high formalization, and low interaction, the capacity to process nonroutine information is reduced. Under these circumstances, certain positive stimuli may be ignored, while only information that would negatively affect the organization is recognized (Fredrickson 1986). A decrease in the capacity to process nonroutine information can also decrease the likelihood of proactive

behavior, which in turn will discourage the pursuit of possible gains (Fredrickson 1986). Collectively, this research suggests that:

- Hypothesis 2a.* Increased capacity of the information-processing structure of the top management team will be positively related to the extent to which a strategic issue is labeled as "positive."
- Hypothesis 2b.* Increased capacity of the information-processing structure of the top management team will be positively related to the extent to which a strategic issue is labeled as a "gain."
- Hypothesis 2c.* Increased capacity of the information-processing structure of the top management team will be positively related to the extent to which a strategic issue is labeled as "controllable."

METHOD

A two-part questionnaire consisting of 114 items was mailed to the CEOs of all 545 hospitals in Texas (excluding prison hospitals, armed services hospitals, and university health centers). Several questions about the characteristics of the respondent were included to ensure that it was in fact the CEO who completed the questionnaire. The first part of the questionnaire was used to gather information about organizational strategy and the top management team information-processing structure. The second part focused on how hospital CEOs label given strategic case scenarios. The questionnaires were pretested through structured interviews with 11 top executives of hospitals.

To control the stimuli that evoke issue interpretation processes and outputs, this study used two case scenarios. The cases were different in content but identical in the amount and type of information provided. Two cases were used to determine whether the hypothesized relationships remained constant across case content. Participating hospital CEOs were asked to report the perspective they would take on each case scenario.

The subjects of the cases were hospital satellite centers and health maintenance organizations (see Appendix A for full cases). Each case contained 16 pieces of information balanced over three dimensions: whether the information was generated internally or externally to the hospital; whether it was derived from a formal or informal source; and whether it represented something that would add to or subtract from

hospital operations. Because order-effect bias was a concern, two versions of the questionnaire were used. The versions differed in the order of the case presentation.

VARIABLE MEASUREMENT

All variables were measured with multi-item, seven-point Likert scales. Items for each of the variable scales were averaged to calculate a variable score. Questionnaire items are presented in Appendix B. For further details of the variable measurements, see Thomas (1988).

Independent Variables

The seven items in the strategy scale were coded so that higher scores indicated more domain-offensive behavior. These items, based on Miles (1982), included such questions as: "To what extent does your hospital try to offer innovative medical services in the area?"

We should note that in an attempt to guard against common methods variance, the strategy variable was also measured using archival data. This second method of strategy classification consisted of examining the change in service/facility offerings of each hospital over a five-year period. Since an important dimension of the offense/defense strategy classification is the extent to which innovative services are added or existing ones retained and improved (Miles 1982), this measure of service change provided a valid measure of strategy. Using the 54 service categories reported for all hospitals in the *Annual Guide Book* published by the American Hospital Association, we constructed a profile of each hospital in terms of the service change they experienced between 1983 and 1987 (see Hambrick 1981). Certain services were weighted in terms of their level of innovation. The difference between the number of services offered in 1983 and the weighted services offered in 1987 became the service innovativeness score for each hospital. Hospitals with higher innovativeness were considered to be more domain offensive (Miles 1982). This service addition score was significantly correlated to the CEO-reported strategy score ($r = .59$, $p < .0001$). When this score was used in the statistical analysis (see Data Analysis, further on), results were essentially identical, giving us confidence that irrespective of the strategy measure used, it was a valid indicator of ways in which the hospital interacted with its environment and the effects of that interaction on interpretation.

The nine items in the top management team information-processing scale were coded so that a higher score indicated higher capacity for information processing. For example, a high score for the

question, "To what extent is there a free and open exchange of ideas among team members about strategic issues?" would indicate a structure with a higher capacity for information processing. The items pertaining to formalization were reverse scaled.

Dependent Variables

Dutton and Jackson (1987) hypothesized that three label dimensions (positive/negative, gain/loss, controllable/uncontrollable) differentiate perceptions of strategic issues. Each label was treated as a separate dependent variable. Five-item, seven-point Likert scales were used to identify the extent to which each label would be used to describe the case scenarios. For example, after they had read a case scenario, CEOs were asked: "To what extent would your hospital . . . feel that benefits will come from the situation?" (a "gain" label); . . . feel it can manage the situation instead of the situation managing it?" (a "controllable" label).

DATA ANALYSIS

The hypothesized relationships between the independent variables (strategy and the top management team information-processing structure) and the dependent variables (the labels applied to the issue) were tested using multiple regression. The effect of the case content was tested by means of a paired-comparison *t*-test, where the means for the responses to the first case were compared to those of the second case. The differences in responses associated with the version of the questionnaire (i.e., order of case presentation) were tested by means of analysis of variance (ANOVA), where version (1,2) was the main effect. Multivariate regression was used to identify the overall relationship of both strategy and information-processing structure to strategic-issue interpretation.

RESULTS

DESCRIPTIVE STATISTICS

A total of 210 hospital CEOs responded to the questionnaire (response rate = 38.5 percent). Of these, 48 responses were unusable because of the respondents failure to complete parts of the questionnaire ($N = 15$), because the respondents were not the CEO ($N = 2$), or because the cases were perceived as not relevant to the hospital ($N = 31$). Chi-square analysis indicated that, in terms of size, type, and ownership,

the remaining 162 hospitals were not significantly different (for all X^2 , $p > .25$; $df = 2,4,6$, respectively) from the state's hospital population.

Table 1 presents means, standard deviations, Cronbach alphas for each variable scale, and Pearson zero-order correlations. All alphas indicate that the scales are reliable measures. The results from the t -tests (all t -scores < 1.42 , $p > .16$) and ANOVA (all $F_{1,160} < 1.68$, $p > .17$) indicated no significant differences between responses based on the case content or version of the questionnaire. Therefore, statistics were calculated with combined measures (i.e., responses for each of the dependent variables from the first case were combined with those of the second case and averaged).

Multivariate statistics indicate that the set of independent variables was significantly related to the set of dependent variables (Wilks's Lambda = .76, $F_{6,310} = 7.51$, $p = .0001$). The relationship of each of the independent variables to the set of dependent labels was: (1) strategy (Wilks's Lambda = .88 $F_{3,155} = 6.59$, $p = .0003$), and (2) the capacity of the top management team information-processing structure (Wilks's Lambda = .92, $F_{3,155} = 4.02$, $p = .008$). When the interaction term (Strategy * Team Information Processing) was added in the multivariate regression model, there was no change in the overall multivariate F .

Table 1: Means, Standard Deviations, Cronbach Alphas and Pearson Correlations ($N = 162$)

	Mean	Standard Deviation	Alpha	1	2	3	4
<i>Independent</i> [†]							
1. Strategy	5.20	1.18	.77				
2. Management Team Information Processing	5.51	0.98	.83	.39***			
<i>Dependent</i> [†]							
1. Positive/Negative	4.47	1.25	.86	.02	.18*		
2. Gain/Loss	4.53	1.18	.87	.03	.18*	.90***	
3. Controllable/ Uncontrollable	5.07	0.94	.68	.38***	.38***	.44***	.48***

* $p < .05$.

** $p < .003$.

*** $p < .0001$.

† All variables are scaled 1-7.

Table 2: Results of Multiple Regression (Numbers in Each of the Cells Represent the Univariate *F*/Unstandardized Beta)

<i>Strategic Label</i>	<i>Strategy</i>	<i>Management Team Information Processing</i>	<i>Overall F (2,157)</i>
Positive/ Negative	.06/-.05	5.20**/.22	2.63*
Gain/ Loss	.16/-.03	4.66**/.20	2.41*
Controllable/ Uncontrollable	28.25***/.19	11.40***/.25	19.82***

* $p < .07$.

** $p < .03$.

*** $p < .0001$.

TEST OF HYPOTHESES

The hypothesized relationships were tested using the multiple regression results. Because the interaction term (Strategy * Team Information Processing) was nonsignificant, it was dropped from the analysis. The results are presented in terms of each of the independent variables: strategy and top management team information processing.

HOSPITAL STRATEGY

A systematic relationship exists between the extent to which a case was labeled as controllable/uncontrollable and the extent to which a hospital's strategy was more domain-offensive or domain-defensive ($F_{2,157} = 28.25, p < .0001$). However, the positive/negative and gain/loss labels were not significantly related to strategy: $F_{2,157} = .06, p < .81$; and $F_{2,157} = .16, p < .69$, respectively.

An examination of the unstandardized regression coefficients in Table 2 shows that the relationship between strategy and the controllable/uncontrollable label is in the hypothesized direction, which lends support to *Hypothesis 1c*. However, the nonsignificant relationship of strategy to the other issue labels means that support is lacking for *Hypotheses 1a* and *1b*.

TOP MANAGEMENT TEAM INFORMATION-PROCESSING STRUCTURE

There is a positive relationship between each of the dependent variables—the positive/negative label ($F_{2,157} = 5.20, p < .02$), the gain/loss label ($F_{2,157} = 4.66, p < .03$), and the controllable/uncontrollable label ($F_{2,157} = 11.40, p < .0009$)—and the capacity of the information-

processing structure of the top management team. *Hypotheses 2a, 2b, and 2c* are therefore supported. Table 2 provides a summary of these results.

Before discussing these findings, certain limitations should be noted. A single informant—the hospital CEO—provided the data for measurement of strategy, structure, and interpretation. We do not know the effect that individual biases, experiences, and schemas had on the results. However, using the top executive as the sole respondent is consistent with Zajac and Shortell (1989), Miles and Snow (1978), and Snow and Hrebiniak (1980), all of whom noted that the CEO represented the most knowledgeable person regarding an organization's position vis-à-vis the environment. Ritvo, Salipante, and Notz (1979) also note that it is the hospital CEO who performs the tasks of interpreting strategic issues and acting in ways that attempt to coalign the strategy, structure, and environment of the hospital to address those interpretations. We should also note that the findings were based on the CEOs' interpretations of hypothetical (although quite realistic) case scenarios and not on observations of how actual strategic issues were interpreted.

DISCUSSION

This study contributes to the current understanding of strategic decision making in hospitals by identifying how certain internal, organization-level features systematically influence a CEO's interpretation of a complex strategic issue. This relationship suggests that any attempt to explain, predict, or alter the interpretation of strategic issues is incomplete unless, in addition to issue-specific factors, it addresses the organizational forces (i.e., strategy and structure) influencing the perception of these issues.

Specific results indicate that one role of hospital strategy is to provide a framework, or world view (Starbuck 1983), that is used by the hospital's CEO during interpretation to determine if a strategic issue is more controllable or more uncontrollable. CEOs in hospitals that are more domain-offensive interpret strategic situations as more controllable, whereas those in domain-defensive hospitals tend to interpret strategic situations as more uncontrollable. However, the strategic pattern is found to have no direct impact on CEOs' perceptions of the positive/negative, gain/loss nature of the issue.

An explanation for these results might be that the world view represented by a given generic strategy helps determine whether the

organization believes it can control factors surrounding the issue, irrespective of perceived possible outcomes. Labeling an issue as controllable or uncontrollable involves a dual process whereby top management assesses not only environmental events but also the hospital's capabilities relevant to meeting the demands of those environmental events (Shortell, Morrison, and Friedman 1990; Zajac and Shortell 1989). This suggests that strategic issues are labeled as controllable when the issues match the organization's capabilities to meet environmental demands. Domain-offensive hospitals may be better positioned to meet a wider range of environmental demands than domain-defensive hospitals because they focus more of their attention on external issues and thereby learn how to deal with externalities. Thus, domain-offensive hospitals are more likely to label strategic issues as controllable. The extent to which a situation is interpreted as positive/negative and as a gain/loss, on the other hand, may be more a function either of the content of the issue or of the information processed about the issue than of the hospital's capacity to meet environmental demands.

The nature of the label given was also found to be linked to the information-processing structure of the top management team. CEOs interpret strategic situations as more positive, as a possible gain, and as being controllable in hospitals characterized by more interaction among members, more participation, and less use of formal decision procedures.

The findings have a number of implications for the ways in which hospital CEOs guide their hospitals through environmental turbulence and, where necessary, change strategy. We found that top managers in hospitals with limited information-processing structures tend to interpret a strategic issue as a threat (i.e., as a potential loss, something negative, and an uncontrollable situation). Past research has shown that, in the presence of threats, organizations tend to restrict their information-processing capacities (e.g., Staw, Sandelands, and Dutton 1981). This may create a positive feedback loop that over time may cause domain-defensive hospitals with limited information-processing capacities to become more defensive and to restrict their information-processing capacities even more. One way to break out of this loop and change subsequent interpretations is to alter information-processing structures. For managers this suggests the following general guideline:

Guideline 1. Hospitals that wish to change their interpretations of the strategic environment can do so by changing the information-processing capacity of the top management team. Information-processing capacities can be altered by changing the levels of participation, interaction, and formalization. This can be accomplished, for example, by having a variety of partici-

pants and earlier participation, and by using a wide variety of techniques for participation in decision making. These activities will serve to break established decision practices.

As suggested by this study, strategy serves as a guiding theory, or a world view, to which hospital CEOs refer when attempting to interpret the strategic environment. For example, domain-defensive hospitals assume little need for product differentiation or change. Accordingly, interpretations of strategic issues emphasize preservation of existing market segments and the efficient provision of a relatively limited product/service line. The present research suggests the following general guideline:

Guideline 2. Hospitals that wish to change their interpretations of the strategic environment can do so by changing their current world view, i.e., their generic strategy. The elements of an organization's world view include assumptions about such things as markets and products. At the very least, managers could explore the use of "counter-heuristics." For example, we know that managers in domain-defensive hospitals assume that their best chance for survival lies with the maintenance of traditional product lines. Managers may counter that assumption by assuming that expanded product lines will improve hospital performance. New and possibly valuable interpretations might result with this altered strategic assumption. This may be accomplished by applying techniques that explore new assumptions and force alternative world views. Such techniques include dialectical inquiry, devil's advocacy, and brainstorming.

Much of the hospital strategy literature (compare Shortell, Morrison, and Robbins 1985) asserts that the environment in which the hospital functions is an independent variable—along with the existing strategy and the structure—affecting the hospital's performance. However, findings from this study suggest that hospital executives develop different interpretations of the same environmental stimuli, suggesting that interpretation of the environment may be a dependent variable affected by the strategy and information-processing structure of the hospital. If we adopt this latter perspective, some interesting observations can be made about strategic interpretation processes in hospitals. For example, if a hospital's action is successful (e.g., if a potential gain is realized), the planned strategy and information-processing abilities of the hospital are often given credit for the success. However, as Weick (1987) conjectures, it is the fact that the hospital took action, even though the action might have been only loosely coupled with strategy and structure—or not related to them at all—that explains the success. Given the turbulent and competitive health care industry, the strategy

and structure of a hospital are only vague maps of how the hospital should proceed, suggesting the following guideline:

Guideline 3. The interpretation of a strategic issue, and the ultimate success of action taken in light of that meaning, comes only when the hospital acts, learns from the action, and gets some better idea of where it is and where it wants to go. In this way hospitals "generate tangible outcomes that help them discover what is occurring, what needs to be explained, and what should be done next" (Weick 1987, 231). Therefore, hospitals must enhance their ability to experiment, improvise, and learn through trial and error.

The guidelines presented here suggest that hospital CEOs can manage the potentially negative effects of existing strategy and structure on strategic interpretation. For example, domain-offensive hospitals may be subject to costly decision errors if they systematically interpret strategic issues as controllable when, in fact, they are uncontrollable. Such consistent bias could lessen the likelihood of success or even survival. By recognizing that these biases may exist, CEOs can use the guidelines suggested here to counter those biases and to develop better informed plans of action for the hospital in dealing with the increasingly turbulent and hostile health care environment.

APPENDIX A

CASE SCENARIOS USED IN QUESTIONNAIRE

Case 1. The makeup of the area population, along certain dimensions, appears to be changing. For example, a recent study by the hospital reveals that nearly one-third of the area population has no regular physician and, considering that the number of medical indigents in the area is dramatically increasing, this proportion may continue to increase quite steeply.

At a recent executive committee meeting, a colleague remarked that nearly 10 percent of the local population is ineligible for health insurance coverage or government-funded health cost assistance. Additionally, the trend in the area toward more service-oriented jobs and self-employment may lead to more and more people being uninsured. The rumor of a new, and supposedly quite large, firm coming to the area is also discussed.

The hospital has been contemplating adding satellite centers to its operations. The mix of services offered by the hospital has seemed right, but the occupancy rate has continued downward. This has sug-

gested to some that the hospital needs to reach out into the perimeters of the area to seek more patients. With the hospital's reputation for quality care and with its capacity to handle increased service provision, your colleagues feel this possible expansion is attractive. However, there is a general concern that there may be some difficulty in attracting needed physicians. Further, with the general shortage of nurses in the area there is concern that nursing support for the centers may be a problem.

A page in the recent hospital financial report shows that DRG outliers are increasing. Given that nearly 40 percent of reimbursement for services to the hospital is from Medicare (with about 30 percent from commercial services), this information on outliers could have an effect on the financial performance of the hospital.

Case 2. The role of HMOs in serving the medical needs of the area is changing. Information to support this includes a survey performed by the hospital, which shows that HMOs have penetrated nearly 20 percent of the market for those under 65 years old. It has been suggested that this percentage could easily grow to 30–35 percent in the next 15 years if the HMO option is made more available.

Additionally, a local marketing firm hired by your hospital to track consumer trends in the area reports that the population in the area will be increasing through the year 2000. Currently, 75 percent of the population is under 44 years old. It is expected that this percentage will remain constant during the period. Executive staff members feel that the medical needs of this growing population will not only change, but will show dramatic growth in certain areas.

However, a recent internal operations report circulated to staff indicates that ambulatory care utilization of the hospital has fallen off. Some feel this downward direction in ambulatory care utilization may continue in light of the increase in the number of physician group practices and the in-house services that many of these groups are providing (a trend that will probably continue).

An HMO has approached your hospital to negotiate a contractual agreement for the provision of certain services to its members. Your hospital was chosen, according to the HMO representatives, because of its good name recognition and location — two factors that scored very high in a recent survey of HMO members who were asked why they would choose a particular hospital. For some of the services requested by the HMO your hospital is currently unable to meet expected demand. However, top management has always maintained that it would be capable of bringing about needed expansion or change,

although many feel a major reorganization of the hospital may be necessary. Attracting additional and/or specialty medical staff for any expansion program would not be difficult.

APPENDIX B

SCALE ITEMS FROM QUESTIONNAIRE

Items in Strategy Scale

The items in the strategy scale were constructed based on the strategic dimensions discussed by Miles (1982) and converted into language that makes them applicable to the hospital setting.

To what extent does your hospital . . .

- a . . . continually search for new patient bases?
- b . . . try to be the first to offer innovative medical services in the area?
- c . . . offer a wide range of medical services?
- d . . . strongly compete with other hospitals for new patients?
- e . . . acquire new technology to attract patients?
- f . . . enter into joint ventures with other hospitals in the area?
- g . . . focus on a particular segment of the population to serve?

Items in the Information-Processing Structure Scale

The items in the structure scale were drawn from Duncan (1974). Informants were first asked to indicate how many people in the hospital are members of what could be considered the top management team. After considering the makeup of that management team, the informants were asked: To what extent . . .

- a . . . are written rules and procedures followed when this team addresses a strategic issue?
- b . . . can decision making by this top management team be characterized as participative?
- c . . . do the individuals on this team interact with each other on an informal basis?

- d . . . can decision making by this top management team be characterized as rule-oriented?
- e . . . are committees, such as ad hoc task groups, regularly formed to deal with strategic issues?
- f . . . do all members of the team participate in strategic decision making on a regular basis?
- g . . . can decision making by this top management team be characterized as interactive?
- h . . . do one or two of the people on the team dominate the handling of strategic issues by the hospital?
- i . . . is there a free and open exchange of ideas among group members about any strategic issues?

Items in the Scales that Measure the Positive/Negative, Gain/Loss, and Controllable/Uncontrollable Dimensions

There are five items for each dimension. Items were based on Jackson and Dutton (1988). All 15 items were repeated after each of the situations in Appendix A were presented to the CEO informant.

To what extent would your hospital . . .

- a . . . perceive that benefits will come from the situation?
- b . . . label the situation as something negative?
- c . . . have a choice about whether or not to address the situation?
- d . . . feel the future will be better because of the situation?
- e . . . label the situation as a potential gain?
- f . . . feel it has the capability to address the situation?
- g . . . see the situation as having positive implications for the future?
- h . . . feel that there is a high probability of losing a great deal?
- i . . . feel it can manage the situation instead of the situation managing it?
- j . . . be constrained in how it could interpret the situation?
- k . . . feel that how the situation is resolved will be a matter of chance?

- l . . . feel that there is a high probability of gaining a great deal?
- m . . . label the situation as a potential loss?
- n . . . label the situation as something positive?
- o . . . see the situation as having negative implications for the future?

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