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Evolving Patterns of Organizational Beliefs in the Formation of Strategy

By examining marketing's strategic role through the lenses of managers operating throughout the organizational structure, researchers and strategists can gain special insights. Adopting a structural-cognitive perspective, the authors employed a longitudinal design, coupled with snowball sampling, to explore the beliefs and changes in beliefs of key actors in a major strategic decision. The results show a dramatic conflict across functions in the interpretation of a proposed new strategy and its consequences. The authors conclude with a discussion of the implications of the results for the study of managerial thought worlds, organizational learning, and strategy development.

Emerging marketing and strategic management conceptualizations depict strategic decisions as rather disorderly and disjointed processes around which competing functional areas and actors at different hierarchical levels contend (Anderson 1982; Hutt, Reingen, and Ronchetto 1988; Pennings 1985). However, "much of the discussion of strategic marketing continues to reflect an economically rational view of managerial decision making and organizational behavior" (Walker, Ruekert, and Roering 1987, p. 13). In particular, Ruekert and Walker (1987a, p. 1) observe that the marketing literature "largely ignores or assumes away the political processes, jockeying for influence, conflicts, and communication difficulties" that arise during decision making and implementation. Thus, very limited empirical attention has been given to examining the partisan interplay between marketing and other functional units as strategies are formed, even though the traditional paradigms of marketing are expanding to incorporate negotiated exchanges with internal and external coalitions (Day 1992; Day and Wensley 1983; Webster 1992).

Understanding such partisan interplay is critical to understanding the role that marketing performs in negotiating strategy with other functional units. Managers, representing various functional areas, are likely to perceive a strategic decision from perspectives that originate in different functional subcultures, different beliefs about desired ends and their means of achievement, and different self-identities and self-interests (Deshpandé and Webster 1989; Lyles and Mitroff 1980; Shrivastava and Mitroff 1983). Given these divergent "thought worlds" (Dougherty 1989) and self-interests, conflict is likely, and the chosen strategic course, as Walsh and

Fahey (1986, p. 333) suggest, may represent "some mingling of belief accommodations and political compromises."

The study we report responds to the call of Deshpandé and Webster (1989, p. 12) for research examining "how differences in the world views of different groups or departments ... help or hinder the enactment of marketing decisions." We view conflict among functions over the strategic direction of the firm as having origins in not only different thought worlds, but also concerns over subunit identity and "turf" and poor communication among subunits. Combining qualitative and quantitative perspectives in a longitudinal design, we examined a highly contested strategic decision in a *Fortune* 500 high-technology company. The decision centered on the development of a core technology (Capon and Glazer 1987), the ultimate configuration of which would have a major impact on the firm's competitive strategy. Specifically, we used open-ended interviews to elicit the beliefs of key participants in the decision process who represented multiple functional units, departments, and several hierarchical levels in the organization. Particular attention was given in our study to exploring changes in the pattern of individual and collective beliefs within the contours of both the formal and informal structures of the organization.

Though valuable, much of the previous work relevant to the analysis of strategic decision making has been conceptual in nature (e.g., Prahalad and Bettis 1986; Weick and Bougon 1986), restricted attention to top management (e.g., Ginsberg and Abrahamson 1991) or particular departmental units (e.g., Dutton, Walton, and Abrahamson 1989), or utilized a laboratory setting (e.g., Walsh, Henderson, and Deighton 1988). The present study contributes to this research stream by adopting a multifunctional perspective and examining the changing beliefs of the full range of organizational members who shaped a major strategic decision.

Our discussion is divided into three parts. First, we provide a synthesis of the collective action theory of strategic decision processes, a conceptual perspective particularly ap-

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appropriate to our study, and explore the possible origins of conflict between marketing and other functional units over strategic change. Second, we report research results from the examination of belief patterns at two important stages, six months apart in the strategy decision process. We conclude by discussing key managerial and research implications.

Collective Decision Processes in Strategy Formation

Conceptualizations of how marketing management decisions are made and implemented emphasize the basic assumptions of the system-structural perspective of organizational theory (Walker, Ruekert, and Roering 1987). Here, the manager's task is to assemble and evaluate environmental information and then rationally employ that information in structuring marketing activities to produce the desired market response in line with organizational objectives. Although some marketing management decisions that address technical, recurring components of marketing programs (e.g., media scheduling or trade show budgeting) at the product-market level may fit this computational decision-making mode (Thompson and Tuden 1959), an alternative conceptualization is needed to understand the interplay between marketing and other stakeholders in the broader strategic decision processes of the firm.

Strategic decisions that cut across functional departments or involve issues related to the organization's domain and long-term objectives or the allocation of resources across business units or product markets are best captured by theories of collective action (Cohen, March, and Olsen 1972; Van de Ven and Astley 1981; Walker, Ruekert, and Roering 1987). Included here are decisions involving the direction of corporate strategy (e.g., new business development), the most promising applications of a core technology, or the choice of an alliance partner. Collective decisions, in turn, often encompass important strategic marketing considerations, such as in the choice of customers, product characteristics, or distribution channels (Day 1984).

Subcultures and Thought Worlds

Anderson (1982), in his discussion of the collective action framework, emphasizes that members of a particular unit or functional area such as marketing form highly formalized coalitions of individuals that seek to influence organization strategy. Strategic plans represent the outcome of a bargaining process among functional coalitions. Each functional area attempts to move the firm toward what it views as the desired position for long-run survival, subject to constraints imposed by the objectives and positioning strategies of other functional units. Thus, strategic decision processes often involve the active participation of several interest groups that hold markedly different beliefs regarding organizational means and ends. Figure 1 highlights the position that functional interest groups occupy in the planning hierarchy. Observe that a proposed strategy can be interpreted quite differently across functional units. The ultimate out-

comes of collective decisions tend to unfold in an incremental manner (Quinn 1980) and depend more on the partisan values and relative influence of the various interest groups than rational analysis.

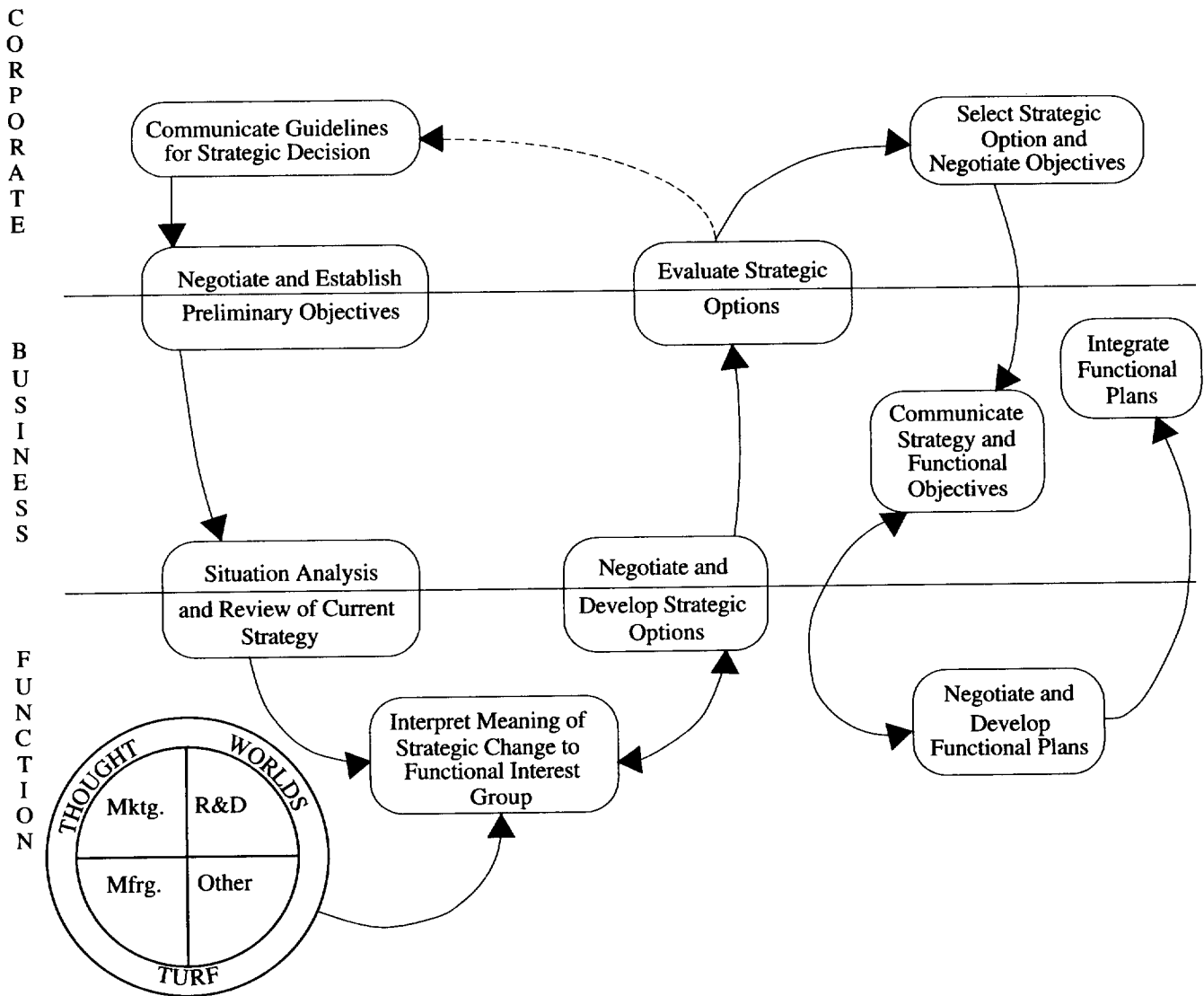
As Dougherty (1990, 1992), Hall (1984), and Daft and Weick (1984) suggest, different meanings assigned to a proposed strategy are often motivated by deeper differences in what might be called subcultures. Subcultures exist in an organization when one subunit shares different values, meanings, beliefs, and goals than another subunit, resulting in different thought worlds (Gregory 1983). For example, Ruekert and Walker (1987b) emphasize that marketing and research and development (R&D) have very different thought worlds. Marketing managers are concerned with customers, competitors, market opportunities, market share, and revenue. In contrast, R&D managers view technical sophistication and innovation as means to organizational success and professional fulfillment (Dougherty 1990). When the controversy is over a major strategic change that will affect the consumer, these different thought worlds create a significant potential for misunderstanding, conflict, and political efforts to control the strategic change process (Workman 1993).

Turf and Self-Identity

Conflict in strategic decision making also can have its origins in concerns over subunit turf. "Turf" is an individual and shared conception of the boundaries of a subunit's authority, expertise, responsibilities, and resources, including budgets and personnel. Conflict over turf can be heightened in the strategy development process if one unit's home turf is threatened by another unit or if the units differ in status and/or represent different subcultures, resulting in communication breakdowns and mutual derogation of competing factions (Ashforth and Mael 1989).

Subunits tend to protect their turf for at least two reasons: self-interest and self-identity. During strategic decision processes, interest groups form around official objectives, responsibilities, and intentions of business units; they also form around differences between groups at varying levels of the organizational hierarchy (Dickson 1992; Pettigrew 1985). Hall (1984, p. 907) argues that a driving force of strategy making is simply "the desire of subunits to increase (or defend against the loss of) status and power relative to other subunits." Guth and MacMillan (1986, p. 314) maintain that "middle managers are motivated more by their perceived self-interest than by the organizational interest unless they coincide." In particular, functional managers, who are often part of middle management, are likely to resist those strategic changes that threaten significant sources of self-identity, such as their authority or prestige, and solidly support top management's position when a decision coincides with their self-interests. Within the context of organizations, identity describes what organizational members define as central, distinctive, and enduring about their firm (Albert and Whetten 1985; Fiol 1991); such definitions will vary depending on an individual's position in the organizational structure (Dutton and Jackson 1987). To the extent that the subunit domain defines the individual's identity and connotes prestige and power, the organiza-

FIGURE 1
A Collective Action Perspective of the Strategy Formulation Process^a



^aAdapted from Day (1984)

tional member may be quite reluctant to see the domain altered by a strategic decision (Ashforth and Lee 1990).

Inspired by these structural-cognitive perspectives, our study tests the basic hypothesis that managers' beliefs regarding a strategic decision are shaped by their positions in the organizational structure. Elements of structure that are expected to affect cognitions encompass both the formal structure of the firm (functions, departmental units, and hierarchical levels) and its social architecture of communication relationships among decision participants (communication subgroups) (Fombrun 1986). Our study provides further insight by exploring the relationships among subcultures, thought worlds, turf, and conflict in collective strategic decision making.

Method

Research Setting

In evaluating candidate firms and screening possible decisions within those firms, we sought to identify a project that generally would fit the basic parameters of a strategic decision: the decision must be significant because of the magnitude of resources involved, complex because the solutions are multisided and uncertain in outcome, collective because each solution often hinges on the participation of various interest groups that are involved in the decision-making process, and consequential because the decision imparts relatively enduring commitments that have profound internal and external ramifications (Pennings 1985). Consistent

with these criteria, the strategy decision examined—the Techno project—centered on the development of a new technology for providing key services of a large firm in the communications industry. Top management charged an executive with a technical background to recruit a small team (called hereafter R&D or the R&D team), establish residence in a technical development center remote from the firm's administrative centers, and “brainstorm” potential technology that held promise for enhancing the firm's competitive position and driving costs out of the business. The team was given its own budget and freedom from the usual channels of review and approval for new technology projects. According to the R&D team, one potential use of the technology would enable customers, including new ones, to order products and services via computer interface without contacting a salesperson, thus providing the services much faster and more efficiently than the current system. As the development process unfolded, it became apparent that the technology offered potential applications beyond the automation of the sales function, including a whole host of promising new services for customers. Thus, many options and trade-offs faced the firm. Some of the decision alternatives involved an investment exceeding \$1 billion.

The authors collected data on this decision process at two points, T_1 and T_2 . T_1 coincides with the period immediately after the technology was announced to the company at large. At this point, the R&D team was confident about its progress, favored continued development of the technology and its applications under the team's direction, and recommended implementation of the technology. To the organization at large, the team announced the development of a new service, automated order taking, and their intention to develop other new services. We expected the decision situation to evolve rapidly once the technology proposals were made known to the corporation, because the project needed a renewed funding commitment during the budgeting cycle of the firm. T_2 occurred six months later and coincided with the project funding decision. Thus, several project milestones were expected to pass during the term of the study.

Data Collection

A snowball technique was used to identify organizational members who were involved in the Techno project. The technique identifies members of a network of decision participants by asking each actor to identify others with whom he or she communicated regarding a specific decision situation (e.g., Moriarty 1983). To be considered a member of the strategy decision-making network, a manager had to be identified as a decision participant by at least three other organizational members. Following this procedure, 42 managers were identified as members of the strategy decision-making network at T_1 , and interviews were conducted with 39 of them. At T_2 , the network of managers had expanded to involve 60 participants, 34 of whom also participated at T_1 . Five of the original T_1 participants either retired or were transferred between T_1 and T_2 .

The decision-making network spanned the firm's operation in four states and included representatives from several functional areas, departments, and multiple layers in

the organization hierarchy from low-level managers to corporate vice presidents and above. Telephone interviews were conducted with each member of the decision-making network and tape-recorded with the permission of the participants. Each interview was conducted individually, and respondents were assured that their replies would be kept confidential. Interviews averaged approximately 45 minutes. A questionnaire was designed to direct the open-ended interviews. Open-ended interviews in an organizational context were employed by Mintzberg, Raisinghani, and Théorêt (1976) in a classic study of strategic decision processes and Ward and Reingen (1990) in a socio-cognitive analysis of a consumer group decision-making process.

The executive respondents were asked first to describe the Techno project briefly. Participants then were asked to state what they thought were the pros and cons regarding the project and why. Participants were also asked to identify “other, perhaps sensitive issues” relevant to the project and then were queried regarding their position on each issue identified. This process of questioning draws on the work of Toulmin (1958) and Mason and Mitroff (1981), who provide a framework for interviewing that produces claims and grounds for these claims. The executives also were asked to identify other managers with whom they communicated regarding the Techno project. This information was used to identify the decision-making network and each manager's position in that network.

Beliefs

To ensure the reliability of the data obtained from the transcribed interviews, a systematic objective coding process was required (Kassarjian 1977; Perreault and Leigh 1989). Using exploratory interviews, written communications about the Techno project, and several interview transcripts, we developed an initial coding dictionary of positive and negative beliefs about implementation. We found that the pros and cons of implementation could be grouped into several general categories corresponding to several types of consequences for the firm if implementation proceeded. These categories, shown in Table 1, included effects on customer service, selling efficacy, new product development, technology, costs, investment, and follow-up opportunity. Beliefs also included arguments for and against control of the project by marketers versus members of the R&D team. Although the general categories (e.g., cost and technology) are likely generalizable to many strategic decisions, the specific beliefs within each category are project specific. Within a category, such as costs, we defined possible outcomes of implementation (e.g., cost reduction) and reasons that participants gave for the outcome (e.g., will reduce labor expenses). The definitions were based on the transcripts, and the dictionary included a brief definition of each positive and negative belief as well as example phrases of the concept.

Two judges independently coded the transcripts. If either encountered a new belief, the judge defined the concept, discussed the definition with the other judge, and placed the concept in the dictionary. Subsequently, coded transcripts were then reviewed by each judge for the pres-

TABLE 1
Techno Project Belief Categories: Illustrative Positive and Negative Beliefs

Customer Service	
(+)	(-)
Allows faster service Customers can avoid sales pitch	Customers prefer human contact Poorer customer service will result
Selling Efficacy	
(+)	(-)
Will allow personalized selling Will encourage customers to add services	Will eliminate sales opportunities Will reduce sales revenue
New Product Development	
(+)	(-)
Prototype approach facilitates new product development Project encourages innovation without requiring multiple approvals	Skeptical about prototype approach Hard to generalize from limited test area
Technology	
(+)	(-)
Techno system works	Techno system is worse than present technology
Investment	
(+)	(-)
Short payback Will help stock price	High capital cost Other projects need to be funded
Cost	
(+)	(-)
Will reduce labor expenses Will reduce billing expenses	Uncertain cost reduction Certain expenses will increase
Follow-up Opportunity	
(+)	(-)
May define new ways of doing business	Regulatory concerns

ence of the new concept. After initial coding of the T_1 transcripts, the judges assessed their agreement on several transcripts, discussed differences of perception, made any adjustments necessary in the definitions, and completed the coding of the T_1 transcripts. Dunn and Ginsberg (1986) suggest that 15 to 25 interviews typically will be sufficient to include the universe of beliefs for an organizational decision situation. The T_1 coding scheme was developed from interviews with 39 managers and appears likely to include the organizational universe of beliefs about the decision. Ultimately, 90 beliefs were included in the dictionary.

After the interviews were completed, Perreault and Leigh's (1989) index of reliability (I_r) was computed. For the T_1 coding, $I_r = .8818$. In addition, the lower limit of a .95 confidence interval on $I_r = .8564$ for the T_1 coding. This level of agreement is considered adequate relative to other studies employing similar methods. Having found acceptable reliability levels for T_1 data, a randomly chosen 30% sample of the T_2 transcripts also was checked for reliability. The index of reliability (I_r) for the T_2 coding was .8249,

with the lower limit of a 95% confidence interval being .7778.

Analysis

The analysis focused on the nature of beliefs about the strategic decision at T_1 and T_2 , their change from T_1 to T_2 , and their relation to participants' position in the formal and informal organizational structure. Position in the organization structure was measured by functional role, department membership, hierarchical level, and communication subgroup membership. Communication subgroup membership was determined by analyzing participants' data on their communication patterns via CONCOR, a network analysis algorithm (MacEvoy and Freeman 1987). This algorithm assigns participants to communication groups by the similarity of their pattern of communications (i.e., structural equivalence). Simple-effects analyses of factorial ANOVAs were used throughout to assess the impact of structural position on beliefs.

TABLE 2
Beliefs by Function at Decision Point T₁^{a,b}

Belief Categories		Marketing (n = 16)	R&D (n = 8)	Technical (n = 6)	Corporate (n = 6)	F	p
Customer service	P	1.06	1.37	.67	.67	<1	.0004
	N	2.12	.50	.00	.00	7.96	
	F	7.97	2.70	1.18	1.18		
	p	.008	.10	.28	.28		
Selling efficacy	P	.18	.12	.17	.17	<1	.009
	N	1.94	.25	.67	.17	4.55	
	F	24.74	<1	<1	<1		
	p	.0000					
New product development	P	.81	1.12	.50	.33	<1	.16
	N	.62	.00	.50	.33	1.84	
	F	<1	9.18	<1	<1		
	p		.005				
Technology	P	.00	.00	.00	.00	<1	.053
	N	1.12	.25	1.67	.00	2.84	
	F	13.91	<1	11.45	<1		
	p	.0007		.002			
Investment	P	.12	1.37	.33	1.00	2.99	.04
	N	3.69	1.12	1.17	1.00	9.19	
	F	68.93	<1	1.41	<1		
	p	.0000		.24			
Cost	P	1.31	1.62	1.83	1.17	<1	.08
	N	1.06	.50	.00	.00	2.45	
	F	<1	3.23	4.31	2.61		
	p		.08	.05	.11		
Follow-up opportunity	P	.44	1.87	.17	.67	5.88	.002
	N	.00	.00	.00	.00	<1	
	F	3.92	36.03	<1	3.42		
	p	.06	.0000		.07		
Overall	P	3.94	7.50	3.67	4.00	3.41	.03
	N	10.56	2.62	4.33	1.50	18.18	
	F	54.62	14.79	<1	2.92		
	p	.0000	.0005	.09			

^aData entries reflect the total number of times a particular belief (positive or negative) was mentioned within a particular function divided by the number of participants who were members of the function.

^bP = positive beliefs N = negative beliefs

Results

We first present T₁ results and then examine the change in beliefs from T₁ to T₂. At each point in time, the analysis proceeds from overall results to a more detailed examination of types of belief by position in the organizational structure. In overview, the results will show that beliefs were related mainly to function rather than to other organizational elements such as hierarchical level. At T₁, a serious conflict over the Techno project existed between two functions, marketing and R&D. At T₂, the results show that a dramatic change in beliefs occurred. The two factions seemed to reach greater agreement, with marketing holding much more favorable beliefs about the project than at T₁. The study shows that a mere count of positive and negative beliefs about the project reveals little of the conflict and its sources. Only finer analysis and reference to the qualitative

data provided by the transcripts illuminate the conflict's origins and eventual resolution.

Effects of Structural Position on T₁ Aggregated Beliefs

The structural position relevant to the Techno decision was captured with four variables: function, department, standing in the hierarchy, and communication subgroups. Of these variables, the results show that differences in beliefs were related mainly to function.

Function. Four functions were identified as major players in the strategy decision-making process at T₁: Marketing, R&D, Technical, and Corporate. Simple effects analysis of a 2 × 4 ANOVA of valence-of-beliefs by function-on-beliefs (Table 2, see "Overall") shows a significant difference across functions at T₁ for both positive beliefs (F =

3.41, $p = .03$) and negative beliefs ($F = 18.18$, $p = .0000$). The data entries for Table 2 and those that follow reflect the total number of times a type of belief was mentioned within a particular structural unit (e.g., function) divided by the number of participants who were members of the unit. Marketing had more negative beliefs about implementing Techno than any other function, and R&D had more positive beliefs than any other function. An examination of the valence of beliefs within each function shows that Marketing had more negative ($\bar{x} = 10.56$) than positive ($\bar{x} = 3.94$) beliefs ($F = 54.62$, $p = .0000$). In contrast, R&D had more positive ($\bar{x} = 7.50$) than negative ($\bar{x} = 2.62$) beliefs ($F = 14.79$, $p = .0005$). The other two functions, Technical and Corporate, do not differ significantly in number of positive and negative beliefs. Thus, functional membership is strongly related to conflicting beliefs that managers hold regarding the project at T_1 .

Other structural elements. The 2×4 ANOVAs of valence-of-beliefs by structural position-on-beliefs are presented in Table 3 for the elements other than function. When beliefs are aggregated over categories (Table 3), T_1 differences in positive beliefs across departments are not significant ($F = 1.32$, $p > .10$) but differences in negative beliefs are significant ($F = 2.95$, $p = .05$). The market units, heavily represented by marketing managers, were the most negative and the only departments that had more negative than positive beliefs ($\bar{x} = 8.17$ and $\bar{x} = 3.77$, respectively; $F = 13.25$, $p = .0009$). Observe also from Table 3 that five hierarchical levels (level 5 highest) were represented in the Techno decision process. When aggregated over categories, differences in both positive and negative beliefs are insignificant across levels at T_1 ($F = 1.19$, $p > .10$, and $F < 1$, respectively).

The significant findings for the communication subgroups are accounted for largely by decision participants who represent the Marketing and R&D functions in these communication subgroups. From Table 3, when beliefs were aggregated over categories, note that T_1 differences in positive beliefs are significant ($F = 3.21$, $p = .02$), with subgroup 3, whose 13 members include five R&D managers, being the most positive. In contrast, subgroup 1, whose 11 members include six marketing managers, is the only subgroup that has significantly more negative than positive beliefs at T_1 ($\bar{x} = 8.09$ and $\bar{x} = 3.45$, $F = 8.30$, $p = .007$).

Function by Beliefs at T_1 : Different Thought Worlds

Attention now turns to exploring the conflicting perspectives that the Marketing and R&D functions held regarding the Techno project at T_1 . Table 2 presents the function-by-belief valence by belief-category results for T_1 . Significant differences in negative beliefs emerge across the four functions about Techno project's effect on customer service, selling efficacy, and investment ($F = 7.96$, $p = .0004$; $F = 4.55$, $p = .009$; and $F = 9.19$, $p = .0002$, respectively). Analyses contrasting Marketing and R&D reveal that in each instance, Marketing had significantly more negative beliefs (customer service: $t = 3.14$, $p = .004$; selling efficacy: $t = 2.98$, $p = .005$; investment: $t = 4.03$, $p = .000$). Differences

in positive beliefs across the four functions emerge for opinions about the project's value as an investment ($F = 2.99$, $p = .04$), and its follow-up opportunity potential ($F = 5.88$, $p = .002$). Contrasts involving Marketing and R&D show that R&D had significantly more positive beliefs (investment: $t = 2.76$, $p = .009$; follow-up opportunity: $t = 3.76$, $p = .001$).

Marketing is the only function to have significantly more negative ($\bar{x} = 2.12$) than positive ($\bar{x} = 1.06$) beliefs about Techno's effect on customer service ($F = 7.97$, $p = .008$). Marketers' most often-expressed fears were that customers prefer human contact to interaction with an automated system and thus would perceive the system to deliver poorer customer service. As the following transcript quotes illustrate, marketers' objections are consistent with their functional subculture. In the marketing paradigm, the firm should devote itself to satisfying customers' needs and wants. In contrast with Marketing, the other functions expressed little concern about negative customer reaction to the automated service.

- Marketing Manager: "The customer is not likely to want to deal with an automated service, and this is one of the cons."
- Marketing Manager: "If there's a perception that this can be done on a very large scale with just machine interface, there's naivete about how we serve our customers."

From Table 2, observe that Marketing is also the only function to express significantly more negative than positive beliefs regarding both the selling efficacy and investment implications of the Techno project ($F = 24.74$, $p = .0000$; $F = 68.93$, $p = .0000$, respectively). To illustrate, the marketers' most frequently mentioned negative beliefs regarding selling efficacy were the fears that automated order taking would eliminate the opportunity for sales representatives to assess customer needs, explain the firm's services, and engage in selling.

- Marketing Manager: "The primary way we sell services today is that when people call in ... we share with them these things that we think may be right for them.... That opportunity tends to be lost if everything is automated, that sales opportunity is lost."

In contrast, R&D adopted an entirely different position regarding the prospects of the Techno project. For example, R&D has significantly more positive ($\bar{x} = 1.87$) than negative ($\bar{x} = .00$) beliefs regarding the follow-up opportunities emanating from the Techno project ($F = 36.03$, $p = .0000$). R&D members believed that the Techno project would lead to the development of new technologies that would form the basis for a new approach to operating the firm and, in effect, a new business strategy. In particular, R&D asserted that the project could be the basis for a reorganization of the company around technical service centers in specific market areas instead of around market units that served a particular class of customers.

- R&D Manager: "My opinion is that we will start to merge some of these market units into more logical organizations."
- R&D Manager: "[The Techno project is] an opportunity to experiment with different ways of running the business and see the end of relationships so that we optimize the entire enterprise."

TABLE 3
Aggregated Beliefs and Selected Elements of Organizational Structure^a

A. Beliefs by Department^b							
Decision Point T₁							
	Market Units	Planning	Production	Development	Other	F	p
P	3.77	4.28	5.40	7.00		1.32	.28
N	8.17	5.57	3.10	3.00		2.95	.05
F	13.25	<1	2.02	1.83			
p	.0009		.16	.18			
n	18	7	10	3			
Decision Point T₂							
	Market Units	Planning	Production	Development	Other	F	p
P	5.45	4.80	4.88	4.16	3.50	<1	
N	2.15	1.80	1.33	1.50	3.00	<1	
F	13.98	2.89	21.91	2.74	<1		
p	.0004	.09	.0000	.18			
n	20	5	27	6	2		
B. Beliefs by Hierarchical Level							
Decision Point T₁							
	L1 & L2	L3	L4	L5	F	p	
P	4.00	5.67	3.87	3.00	1.19	.33	
N	5.75	5.67	7.87	3.00	<1	.54	
F	1.06	<1	3.67	<1			
p	.32		.06				
n	12	15	8	3			
Decision Point T₂							
	L1	L2	L3	L4	L5	F	P
P	4.44	4.25	4.47	8.00	5.00	3.04	.03
N	1.33	1.05	2.47	1.44	3.33	1.64	.18
F	6.47	15.20	5.64	28.71	<1		
p	.02	.0003	.02	.0000			
n	9	20	19	9	3		
C. Belief by Communication Subgroup							
Decision Point T₁							
	G1	G2	G3	G4	F	P	
P	3.45	3.00	6.54	4.60	3.21	.02	
N	8.09	5.55	4.23	6.40	1.20	.32	
F	8.30	2.06	2.43	<1			
p	.0068	.16	.13				
n	11	9	13	5			
Decision Point T₂							
	G1	G2	G3	G4	F	P	
P	5.36	4.37	5.15	5.36	<1		
N	2.64	1.37	1.80	1.27	<1		
F	5.18	9.11	14.20	11.65			
p	.03	.004	.0004	.001			
n	11	16	20	11			

^aData entries reflect the total number of times a belief (positive or negative) was mentioned within a particular structural unit (e.g. department) divided by the number of participants who were members of the unit. Data aggregated over belief categories.

^bP = positive beliefs N = negative beliefs

In summary, the T_1 results show that Marketing and R&D had, in many cases, completely opposite views about the consequences of implementing the Techno project. Furthermore, their conflict seems to reflect the different "functional subcultures" of Marketing and R&D. At T_1 , Marketing is worried about the effect of automated ordering on customer relations and sales revenues, as well as the possibility that implementation would take capital away from its short-term projects. In contrast, R&D managers hardly mention these concerns. Instead they assume that customers would respond favorably to automation and voiced ambitious plans to use the technology as the basis for a reorganization and a new corporate strategy.

Control and Turf Issues at T_1

In addition to beliefs about the direct consequences to the corporation of implementing the project, the content analysis revealed other beliefs about who should control the new product development in general, and the Techno project in particular, and the qualifications of the two factions to do so. At T_1 , significant interaction effects were obtained for pro/con arguments that Marketing/R&D should be in control (Marketing: $F = 40.62, p = .000$; R&D: $F = 32.29, p = .0000$). Marketing expressed more pro than con arguments suggesting that it should control new product development ($\bar{x} = 1.50$ and $\bar{x} = .12$), and more con than pro arguments that R&D should control new product development ($\bar{x} = 1.62$ and $\bar{x} = .12$). The exact opposite of this pattern of results was found for R&D (pro R&D: $\bar{x} = 1.50$; pro Marketing: $\bar{x} = .00$; con Marketing: $\bar{x} = 2.75$; con R&D: $\bar{x} = .62$).

Specifically, Marketing members believe that they know the customer and R&D people do not, R&D is technology driven, and R&D does not have new product development experience. In contrast, R&D members believe that they are close to and know the customer and Marketing does not know what the customer wants. Each voices strong negative opinions about the other's ability to manage the project and attributes superior abilities to their own function. The participants' comments also revealed a strong tinge of resentment and paranoia about the motivations and intentions of the other party, as well as failures to communicate. The qualitative data provided by the transcripts further demonstrate the scope and intensity of the conflict.

- Marketing Manager: "My director is concerned that, is convinced [that] it's a conspiracy, that that group [R&D] is going to do all this new product development up there. I'm not that concerned. They won't get very far, they don't have the talent to do the product development. We will do the new product development and we'll do it in a way that it won't bog down the whole project."
- R&D Manager: "I'd like our people to be able to make the [new product] decisions that affect the customers they know so well."

Competing views of the likely market response underlie the positions adopted by the decision participants.

- Marketing Manager: "They [R&D] don't have the expertise on the marketing side to figure out what's going on, and some of their ideas are a little bit off the wall. I mean, they'll tell you they're marketing experts or whatever, but

some of these things.... We've got research that says there's nobody that's going to sit still for that."

- R&D Manager: "I definitely want to see a full voice response [automated order taking] for any type of order regardless of what kind of customer you are.... I would like to see us give customers credit for having some smarts and give them the opportunity I mean, I use voice response elsewhere. I don't see why we can't use it too."

Different views of the meaning of technology as a source of competitive advantage are evident.

- Marketing Manager: "It is technology driven, and there is some propensity to want to stay in control of the technology for technology's sake.... You get so much into the technology, you can sometimes waste time on technology that nobody really wants.... And I think that's a negative, and I think it's unfortunate, but I think it's one of the dangers of being overly technically inclined or overly involved in the technology itself."
- R&D Manager: "So the concept of the Techno project is to find a place where we can try the latest technology, new ideas, reconfigure the business, look at it from an entirely different standpoint, operate that way and observe what happens, and if we like it, then it's a demonstration of what we'd like in other places."

Marketers also accused R&D of failing to communicate with them constructively.

- Marketing Manager: "The project team [R&D] has been very close to the vest. They give us information about the project in little bits and pieces, even though we are major stakeholders in this project.... To me, that is the biggest con of the project."

In turn, R&D managers accused marketing of opposing the project because of self-interest.

- R&D Manager: "There are people ... within the business that are looking toward self-preservation. If they [Marketing] get a notion that we might be testing something that would be in opposition to their pet program or system or whatever it might be, we begin to see cheerleaders standing up and encouraging us to use the one that's there. They'll attempt to use the corporate political process to get us a direct order that that's the only thing we can use."

Effects of Function on T_2 Beliefs

The significant differences across functions that were evident at T_1 generally disappear at T_2 . From Table 4, note that a fifth function, Service, was involved in Techno deliberations at T_2 . For aggregated beliefs, Table 4 shows insignificant differences for positive beliefs ($F = 1.58, p > .10$) as well as negative beliefs ($F < 1$). In stark contrast to the T_1 results, Marketing now has significantly more positive ($\bar{x} = 5.37$) than negative ($\bar{x} = 2.06$) beliefs ($F = 12.18, p = .001$). Similarly, with regard to belief categories, differences across functions are now insignificant for customer service (positive beliefs: $F = 1.73, p > .10$; negative beliefs: $F = 1.93, p > .10$), selling efficacy (positive beliefs: $F = 1.85, p > .10$; negative beliefs: $F = 1.87, p > .10$), and investment ($F < 1$ for positive as well as negative beliefs). Only the T_1 significant difference for follow-up opportunity remains ($F = 2.78, p = .03$), with R&D still the most positive.

TABLE 4
Beliefs by Function at Decision Point T₂^{a,b}

Belief Categories ²		Marketing (n = 16)	R&D (n = 9)	Technical (n = 25)	Corporate (n = 6)	Service (n = 4)	F	p
Customer service	P	2.00	1.78	1.00	1.33	2.50	1.73	.16
	N	.06	.00	.08	.00	.50	1.93	.43
	F	28.56	13.53	10.06	5.07	7.61		
	p	.0000	.0005	.0025	.03	.008		
Selling efficacy	P	.75	.00	.12	.33	.75	1.85	.13
	N	.81	.22	.12	.67	.00	1.87	.13
	F	<1	<1	<1	<1	1.23		
	p					.27		
New product development	P	1.00	1.22	.96	.17	.50	1.44	.23
	N	.25	.11	.32	.17	.00	<1	
	F	8.44	10.42	9.60	<1	<1		
	p	.005	.002	.003				
Technology	P	.06	.44	.08	.16	.25	2.23	.08
	N	.18	.00	.48	.50	.50	1.40	.25
	F	<1	3.94	7.84	1.31			
	p		.07	.007	.26			
Investment	P	.12	.11	.08	.00	.00	<1	
	N	.50	.67	.44	.50	.50	<1	
	F	2.13	2.62	3.06	1.42	<1		
	p	.15	.11	.08	.24			
Cost	P	1.06	1.78	.52	1.50	.25	3.56	.01
	N	.25	.00	.20	.33	.25	<1	
	F	9.04	24.34	2.19	6.99	<1		
	p	.004	.0000	.14	.11			
Follow-up opportunity	P	.37	1.55	1.32	1.00	.75	2.78	.03
	N	.00	.00	.00	.00	<1		
	F	2.13	20.59	41.19	5.67	2.13		
	p	.15	.0000	.0000	.02	.15		
Overall	P	5.37	6.89	4.08	4.50	5.00	1.58	.19
	N	2.06	1.00	1.64	2.16	1.75	<1	
	F	12.18	21.66	10.33	2.27	2.93		
	p	.001	.0000	.002	.14	.092		

^aData entries reflect the total number of times a particular belief (positive or negative) was mentioned within a particular function divided by the number of participants who were members of the function.

^bP = positive beliefs N = negative beliefs

Changes in Beliefs Across Functions From T₁ to T₂

To explore the apparent changes in beliefs more specifically across functions from T₁ to T₂, Table 5 presents the means of the T₁ and T₂ positive and negative beliefs of the respondents who participated in both data-gathering phases. Overall, when the beliefs are collapsed, the simple time-by-valence interaction effect is significant only for Marketing (F = 37.14, p = .0000). Observe in Table 5 that within Marketing, the simple time-by-valence interaction effect for individual belief categories is significant for customer service (F = 25.44, p = .0000), selling efficacy (F = 7.53, p = .01), investment (F = 38.24, p = .0000), and technology (F = 5.52, p = .025). Examination of the cell means reveals that the changes in Marketing's aggregated beliefs and these category-specific beliefs were due to the adding of positive beliefs and especially the dropping of negative beliefs from T₁ to T₂. Thus, the changes in Marketing's beliefs provide the key to understanding the more favorable beliefs of the entire system of organizational participants at T₂.

Conflict Resolution

The major change from T₁ to T₂ was produced by a turnaround in Marketing's view of the project in certain belief categories, particularly customer service, selling efficacy, investment, and technology. Without the rich data provided by open-ended interviews and a detailed coding scheme, the inquiry might end here. However, the transcripts provide further insights into why Marketing changed its stance:

- Marketing Manager: "[Marketing] did an extremely effective job of stepping right in the middle of it and strangling it.... What has happened is by laying out the market unit concerns and again, refocusing on the fact that we are market based, basically what Marketing did was force the R&D team into a submissive position where they no longer had the autonomy they once had to go about making decisions—they now get input. And whether it's formal or informal, they definitely get the buy-in of marketing before they move forward on what they're doing now. So consequently, marketing has basically taken something that was viewed as a

TABLE 5
Changes in T₁/T₂ Beliefs by Function^a

Belief Category ^b	Function ^c	T ₁		T ₂		Simple Interaction	
		Positive	Negative	Positive	Negative	F	p
CS	MARK	1.13	1.93	2.13	.06	25.44	.0000
	R&D	1.37	.50	1.62	.00	<1	
	TECH	.80	.00	2.60	.00	3.34	.077
	CORP	.67	.00	1.33	.00	<1	
SE	MARK	.20	1.87	.80	.86	7.53	.0101
	R&D	.12	.25	.00	.25	<1	
	TECH	.00	.80	.20	.60	<1	
	CORP	.17	.17	.33	.67	<1	
NP	MARK	.73	.53	1.00	.27	1.96	.17
	R&D	1.12	.00	1.12	.12	<1	
	TECH	.60	.40	.40	.40	<1	
	CORP	.33	.33	.17	.17	<1	
T	MARK	.00	1.07	.06	.20	5.52	.0255
	R&D	.00	.25	.50	.00	1.90	.18
	TECH	.00	1.60	.20	.40	4.14	.0507
	CORP	.00	.00	.17	.50	<1	
I	MARK	.13	3.67	.13	.53	38.24	.0000
	R&D	1.37	1.20	.12	.62	1.19	.29
	TECH	.20	.80	.40	1.20	<1	
	CORP	1.00	1.00	.00	.50	<1	
C	MARK	1.40	.87	1.13	.27	<1	
	R&D	1.62	.50	2.00	.00	1.42	.24
	TECH	1.40	.40	.80	.20	<1	
	CORP	1.17	.00	1.50	.33	<1	
FO	MARK	.40	.00	.40	.00	<1	
	R&D	1.87	.00	1.62	.00	<1	
	TECH	.20	.00	.80	.00	1.12	.30
	CORP	.67	.00	1.00	.00	<1	
Overall	MARK	4.00	9.93	5.67	2.20	37.14	.0000
	R&D	7.50	2.62	7.00	1.00	<1	
	TECH	3.20	4.00	5.40	2.80	1.62	.21
	CORP	4.00	1.50	4.50	2.17	<1	

^aFor decision participants involved at both T₁ and T₂, the data entries reflect the total number of times a particular belief was mentioned within a particular function divided by the number of participants who were members of the function.

^bCS = Customer service T = Technology FO = Follow-up opportunity

SE = Selling efficacy I = Investment

NP = New product development C = Cost

^cMARK = Marketing (n = 15) TECH = Technical (n = 5)

R&D = Res. & Dev. (n = 8) CORP = Corporate (n = 6)

threat to market-based management and a threat to being committed to consumer needs, they've taken that threat and basically made it impotent."

- Marketing Vice President: "Before I felt it was more technology driving the process. Now I feel that technology is partnering with the marketplace. And the reason I feel that way is because we have [marketing people] in place that are working very closely with how this technology develops."

Once marketing managers gained greater control of the Techno project, they insisted that the technology would be used in a different way than the R&D team had envisioned. They insisted that customers continue to call in their re-

quests to a sales rep, not an automated order taking system, but that the rep would use the technology to fulfill the customer's order in a faster, more reliable manner than previously had been possible. Marketers believed that this change would improve both customer service and selling efficacy. The result was a dramatic change in the opinions of marketing about the worth of the project for the corporation. A participant best summarized his view of the decision-making process in the organization by saying that "sometimes the process is bloody, ugly, just like sausage meat being made. It's not pretty to watch but the end results are not too bad."

Discussion and Implications

Our findings support the view that an organizational member's beliefs regarding a strategy situation are shaped by the structural context in which positions are embedded in the organization. Strong support for this structural-cognitive perspective is obtained when examining managers' beliefs along functional lines. The results demonstrate that function plays an important role in shaping beliefs at the formative stage of the strategy decision-making process. At T_1 , significant differences in several belief categories are observed across functions. Furthermore, when beliefs are collapsed over the categories, both positive and negative beliefs differ across functions.

Differences in beliefs across functions that exist at T_1 disappear at T_2 . The results shed light on the interplay between functions and the mingling of belief accommodations that characterize strategic decision processes. As the Techno decision process unfolded, beliefs in selected categories—such as customer service, selling efficacy, and technology—changed as marketing managers added positive beliefs and/or dropped negative ones. Importantly, the change in the beliefs of marketing managers is central to understanding the more favorable beliefs of the entire system of participants. The analysis of the Marketing-R&D turf battle and the supporting transcripts suggest that Marketing was concerned that R&D would maintain control of both the Techno project and the stream of new products emanating from the technology. Once this issue was clarified and control by the marketing function was ensured, negative beliefs regarding the project were dropped and positive beliefs were added by the marketing managers. In turn, R&D contributed to a more positive climate by agreeing that customers should order through sales reps who would be aided, not replaced, by the new technology. Overall, then, our findings support the view that individuals' beliefs regarding a particular marketing decision are shaped to an important degree by "where they sit" in the organization.

Limitations

To put our findings in a proper perspective, we must consider some limitations of the study. First, the fact that the study centers on a strategic decision process in one organization limits the generalizability of the results. Importantly, however, the study design is consistent with other single-organization studies that have employed a structural perspective (e.g., Brass 1984; Fombrun 1983) and it incorporated a longitudinal element, qualitative and quantitative analyses, and a network perspective in line with the recommendations of strategy researchers (Ginsberg and Abrahamson 1991; Walker, Ruekert, and Roering 1987). Furthermore, our design incorporated the full complement of organizational decision makers and accommodated the entry of additional actors as the strategic process unfolded.

Second, our insights into the processes that brought about change from T_1 to T_2 were limited largely to retrospective comments by participants. We did not have complete access to their communications and thoughts over this six-month period. However, field studies of marketing's role in major strategic decisions, organizational learning, and

major technical innovations that incorporate a longitudinal component are rare, especially studies examining a broad array of executive decision makers. In fact, studies of this type are rare in the general strategy literature. The implications of the study for managers and researchers, tempered by these limitations, follow.

Implications for Managers

First, because of differences in turf, reward systems, and identity, strategic decisions pose a threat to some organizational units and present an opportunity to others. In our research, the turf battle between the marketing and R&D functions emerged in the formative stages of the decision process, and the resolution of the conflict was critical to the selection of a strategic course. In advocating a particular strategic course, marketing managers must be alert to the likely response that an initiative may arouse in other functional interest groups. Defensive behavior can be expected from those managers who perceive that their turf or task domain might be altered by the strategic decision (Ashforth and Lee 1990). Clearly, the transcripts of interviews from our research indicate that selected managers perceived their opponents' views as threatening and extreme and were prepared to use roadblocks to alter the course of the Techno project. To build pockets of trust and commitment, Quinn (1980) recommends that managers develop and use a communication network that includes organizational members who have a major stake in the decision. Marketing managers can use such personal networks profitably to understand the interests of other stakeholders, communicate their own interests clearly and sensitively, and thus diffuse the anxiety of others regarding threats to their turf.

Second, our research reinforces the importance of interdepartmental connectedness in facilitating the dissemination of and responsiveness to market intelligence (Kohli and Jaworski 1990). At the formative stage of decision making, the marketing and R&D functions held strikingly different beliefs regarding the likely impact of the technology on customer service. Rectifying such divergent interpretations of the likely market response to an innovative strategy is fundamental to the marketing manager's interdisciplinary role in strategic decision processes (Hutt and Speh 1984). Research suggests that interdepartmental conflict inhibits communication across functions (Ruekert and Walker 1987a) and retards the dissemination of market intelligence, an integral component of market orientation (Kohli and Jaworski 1990). Open channels of communication across functions are especially crucial during strategic decision processes involving significant technological change. Often, as in our study, the planned configuration of the technology changes as the process unfolds. This, in turn, can alter the enthusiasm and commitment of R&D for the technology and resulting forecast by the marketing function of the likely customer response. Ruekert and Walker (1987b) recommend the creation of more formal, structured ties between marketing and R&D to avoid misunderstanding, and in our study such communication ties were forged to reduce conflict.

Third, our study reaffirms the importance of organizational learning in strategic marketing decision processes.

The study provides a rare demonstration of significant individual and collective shifts in beliefs about a strategic decision. Furthermore, the study suggests the influence of both structural and interpretive factors on organizational learning (Daft and Huber 1987). At the outset, uncertainty, controversy, and insufficient information surrounded the decision. Marketing managers perceived the project as a threat to their turf and developed an interpretation of the project focusing on its potential negative impact on a variety of organizational outcomes. R&D, viewing the project from a different structural vantage point, interpreted its potential very differently. When the marketing managers succeeded in gaining more control over the project, and ending its threat to the sales function, negative beliefs across several categories were “unlearned” (Nystrom and Starbuck 1984) and dropped out of their cognitive maps. These results suggest the links among self-interest, organizational politics, beliefs that are learned, and beliefs that become less salient. They also suggest the possibility that changing one or a few beliefs will affect many others. The belief changes observed provide support for Quinn’s (1981) classic description of strategic processes as encompassing strategy “one step at a time” and Day’s (1990, 1992) emphasis on adaptive and flexible planning processes.

Implications for Research

By examining the formation of marketing strategy through the lenses of other functional units and managers at varying levels in the hierarchy, several implications for strategy research are suggested.

First, strategic issues ignite differing perceptions across various structural elements of the organization. Given the importance of learning to strategy formation, particular attention might be given to the manner in which information regarding a strategic issue is distributed across functions and between levels of the organizational hierarchy. An uneven distribution of information can heighten ambiguity, spawn political maneuvering, and delay decision making. Further research also might examine how alternative organizational structuring mechanisms affect the belief patterns of key decision makers and shape their perceptions of the task domain or organizational territory. Such work appears to be especially timely as organizations are adopting leaner, more flexible structures and emphasizing interfunctional teams (Kanter 1989). In particular, research is needed on organizational structuring processes that most effectively integrate marketing, R&D, and manufacturing functions and make them responsive to corporate strategy. The rising importance of time-to-market as a source of competitive advantage provides a strong rationale for such work (Stalk and Hout 1990). Likewise, additional work could explore how organizational beliefs are affected by alternative reward and measurement systems (Anderson and Chambers 1985), such as the inclusion of market-based measures (e.g., customer satisfaction) (Webster 1988).

Second, more research is needed to clarify the process through which the beliefs of diverse organizational actors are melded into a strategic decision. A central question here is, How are key decision premises negotiated during the strategy-making process? Thus, attention centers on the interplay among beliefs, politics, and negotiation. Guidance for this line of inquiry can be derived from Walsh, Henderson, and Deighton (1988), who explored the negotiated belief structures of student strategy teams in an experimental setting (see also Walsh and Charalambides 1990; Walsh and Fahey 1986). Likewise, Dunn and Ginsberg (1986) offer several measures that can be applied in exploring the sociocognitive links between organizational members.

Finally, researchers should attempt to examine not only managers’ beliefs, but the connections among these beliefs and the larger reasoning structures of which they are a part. Little empirical work exists examining the “causal maps” of managers, particularly for marketers. Managers’ causal maps can be inferred from their arguments about a proposal using argument coding systems (e.g., Axelrod 1976; Huff 1990), or managers could be given an exhaustive set of potentially relevant beliefs (developed from prior research) and asked to arrange them in causal order to show their reasoning about the consequences of different strategic options.

Conclusions

Before I built a wall I'd ask to know
What I was walling in or walling out,
And to whom I was like to give offense.
Something there is that doesn't love a wall,
That wants it down....

Robert Frost, “Mending Wall,” 1914

Some researchers have been critical of the marketing discipline for relying on economic and rational tools of strategy analysis, emphasizing the brand or product market as the unit of analysis, and neglecting broader strategic processes in the firm (Biggadike 1981). Adopting a collective action perspective, we traced a major strategic decision in a large organization and found some support for a structural-cognitive perspective on organizational beliefs. In particular, our results indicate that managers representing different functions held different beliefs related to their subcultural thought worlds regarding the meaning of a proposed new strategy. At the initial stages of decision making, they adopted the view that “good fences make good neighbors.” Conflict and mutual derogation followed. As the political struggle changed the character of the project, beliefs in key decision categories changed as positive beliefs were added and negative beliefs were dropped. Such patterns highlight the related roles that structure, subculture, internal politics, and organizational learning assume in strategic decision processes.

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