
Environmental scanning and organizational culture

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Abstract

This paper examines the connection between environmental scanning for market intelligence, organizational culture and generic strategies. The generic strategies, based on the Miles and Snow typology, are related to the organizational culture types developed by Deshpande *et al.* An enhanced model of the one proposed by Deshpande *et al.* is presented. By providing a more complete model, it is possible to more accurately represent an organization's interaction with its environment with respect to its generic strategy and scanning approach. Propositions are presented pertaining to the type of scanning approach utilized by organizations in each quadrant. The paper concludes with planning implications for each quadrant.

With the increasing usage of market and competitive intelligence as the front-end for the strategic process, environmental scanning is becoming an accepted tool to supplement and guide the decision-making process of upper-level managers.

Environmental scanning allows managers in the organization to become instantly aware of environmental factors that could significantly influence the organization and its strategic direction.

Wood (1997) identifies several sources of information for the scanning process, including traditional sources such as employees, customers, suppliers, and trade publications. Wood also emphasizes other sources such as competitors' Web sites, suppliers' Web sites, and on-line SEC filings in order to get a comprehensive view of the supply chain, competitors, relevant government issues, and emerging technologies.

Narver and Slater (1990) assert that for a firm to possess sustainable competitive advantage, it must constantly monitor several information sources simultaneously. They note that these sources should provide intelligence on both a firm's customers and its competitors. They further state that companies that achieve superior customer value require competence in multiple market intelligence strategies (Slater and Narver, 2000). Not only are multiple sources of intelligence available, but there are also many approaches to environmental scanning for that intelligence. These range from conversations with employees or outsiders with whom managers interact in conjunction with their job (Miller, 1994) to the use of specialized tools such as information delivery services. Frolick *et al.* (1997) show that even tools commonly intended for other uses can be adapted and used to gather information about the external environment.

Their study explains how an executive information system can be modified to gather and analyze data from the environment in order to assist in the decision-making process.

Since Aguilar's (1967) initial proposal of the environmental scanning process, several studies have investigated various aspects of the process. Hagen and Amin (1995) explore the relationship between Porter's generic business strategies (differentiation and cost leadership) and environmental scanning activities, and find that organizations using a differentiation strategy scan the environment primarily for opportunities for growth and customer needs, while a cost-leadership strategy is associated with scanning for threats from competitors and regulators.

In one of the latest studies, Beal (2000), examines the relationship between frequency and scope of scanning and the firm's ability to align its competitive strategy with its environment. The study indicates that while frequency of scanning does not appear to be related to environment-competitive strategy, scanning of multiple situations or events that occur in the environment has some impact on the alignment of competitive strategy and the environment. Beal (2000, p. 30) further states:

... firms pursuing either a combination of low cost leadership and quality differentiation or a combination of low cost leadership and service differentiation in mature industries should monitor and analyze information regarding their own resources and capabilities as well as diverse information on customers and competitors.

Deshpande *et al.* (1993) produced a model of organizational culture types that combines organizational culture, innovativeness, and customer orientation. Empirical tests of those types for organizational performance



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found that organizations with higher customer orientation and organizational innovativeness show evidence of performance improvements.

Although the Deshpande *et al.* model includes several behavioral characteristics, it fails to take into account the environmental scanning mechanisms used by the organizations in each quadrant in Figure 1. This is a significant oversight because, according to Hambrick (1981), the environmental scanning process is the first link in the chain of perceptions and actions that permit adaptation to the environment. This paper extends the Deshpande *et al.* (1993) work by associating environmental scanning mechanisms with each organizational culture type and by linking culture type and environmental scanning method to the Miles and Snow (1978) generic strategy.

This paper begins with an explanation of the Deshpande *et al.* (1993) organizational culture model. Next, the conceptual background for linking culture and generic strategy is presented. Propositions are presented regarding the environmental scanning methods and generic strategy. The paper concludes with implications for future research.

Conceptual background of the Deshpande *et al.* model

The Deshpande *et al.* (1993) model is a matrix with two key dimensions, both continua, that define the organizational culture types. The vertical axis is the organic to mechanistic process continuum. The horizontal axis is the continuum between internal maintenance and external positioning. These key dimensions are a melding of two significant theoretical positions. The first has its basis in the systems-structural view (Van de Ven, 1976; Zey-Ferrell, 1981) from organizational behavior literature, while the second is from the transaction cost economics perspective (Williamson, 1975). This merging of the two positions is supported by Ruekert *et al.* (1985), who suggested using such a combination of theoretical bases since the weaknesses of each are offset by strengths of the other. The model is portrayed in Figure 1.

Organic versus mechanistic process – the vertical axis

An organic process is usually associated with a flexible, free-flowing approach to management. Employee tasks are contributory to the department and are commonly redefined through team approaches. The organizational hierarchy is

less authoritative in an organic process. Rules are fewer, seldom written, and frequently ignored even if the rules are recorded (Daft, 1992). Communication lines tend to be horizontal as knowledge and task control can originate anywhere in the organization.

A mechanistic process is the polar opposite of organic. Management tends to be rigid and highly centralized. Most decisions are made at the top management layer of the bureaucracy. Rules and procedures are written, formalized, and closely followed. Lines of authority are clear. Communication channels are vertical, as required for top management decision-making.

Internal maintenance versus external positioning – the horizontal axis

An internal maintenance approach is associated with the effectiveness of internal organizational health and efficiency. Goals of an internally focused organization include smooth internal operations evidenced by high productivity. Departmental activities mesh. A second indicator of internal efficiency is economic efficiency, stated in terms of output divided by input (Daft, 1992). For example, economic efficiency could be measured by the number of units sold divided by the number of sales personnel.

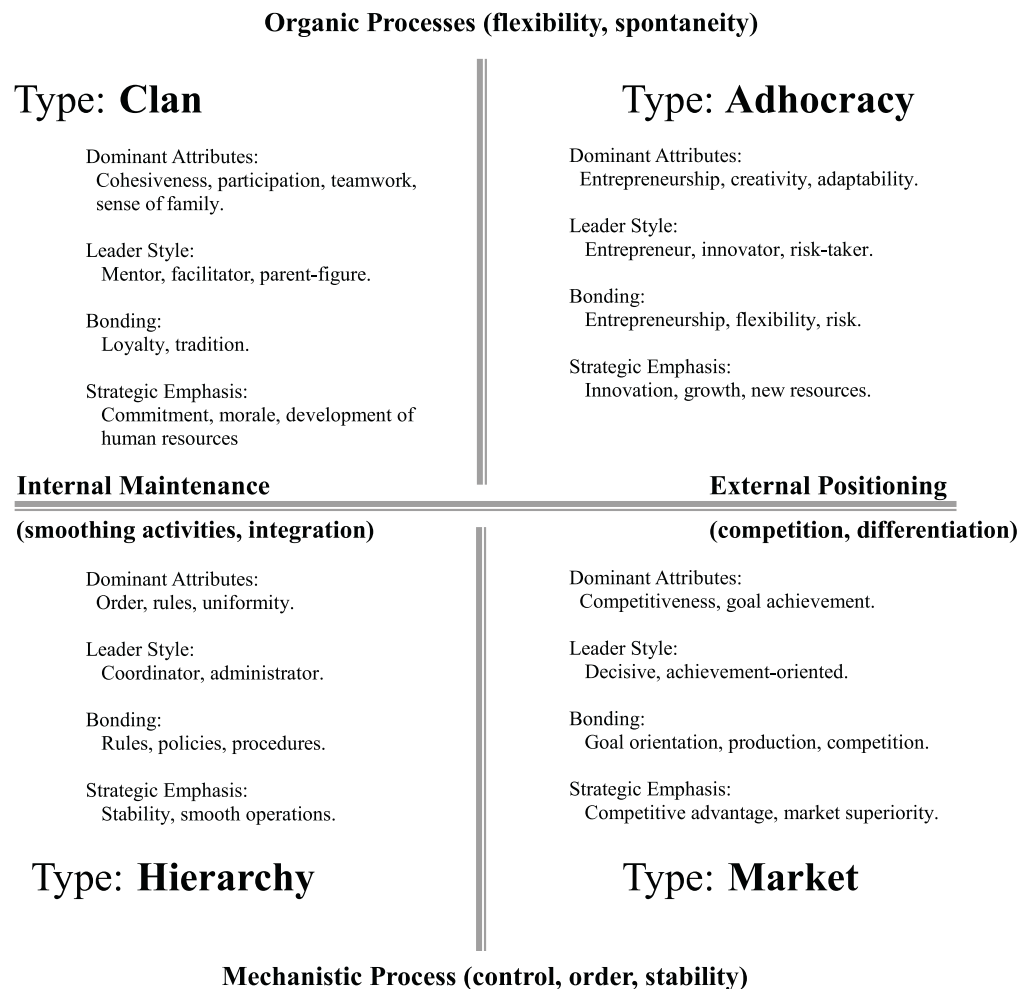
External positioning is the counterpoint to internal maintenance. External positioning is primarily concerned with competition and differentiation (Deshpande *et al.*, 1993). The primary goals of an externally positioned organization include productivity and profit (Daft, 1992). Sub-goals are intended to help the organization achieve its primary goals in a rational way (Daft, 1992). Such sub-goals include internal planning and goal setting.

The organizational culture types model

In the Deshpande *et al.* (1993) model, the two key dimensions have been combined to form a two-by-two matrix. The upper-left quadrant is labeled Clan, the upper-right quadrant Adhocracy, the lower-right quadrant Market, and the final quadrant, lower left, is labeled Hierarchy. As Deshpande *et al.* point out, these quadrant labels are consistent with previous work on organizational forms by Ouchi (1980), Mintzberg (1979), and Williamson (1975). The model is also consistent with the seminal work by Quinn (1988) on “competing values” model of organizational effectiveness.

Sharing both organic process traits and internal maintenance traits, the Clan quadrant (upper left) describes an organization that is internally focused and flexible in its management process. One of

Figure 1
A model of organizational culture types



Source: Deshpande *et al.* (1993)

the major concerns of this type of culture is to provide opportunities for human resource development through autonomy (Daft, 1992). This culture tends to be more concerned with the group rather than group objectives.

The Market quadrant (lower right) is the converse of the Clan quadrant. Market cultures tend to be market-oriented and structurally controlled (Daft, 1992). The overriding goals are profits through competitive advantage. This culture is market-outcome oriented.

Organizations in the Adhocracy quadrant (upper right) are flexible and market-oriented. Their primary goals are growth and resource acquisition (Daft, 1992). These goals are accomplished by establishing a fit with the external environment that encourages a good relationship with that environment. Readiness, flexibility, and entrepreneurship are the hallmarks of the Adhocracy culture.

The Hierarchy quadrant (lower left) is the opposite of the Adhocracy quadrant. With characteristics from external positioning as well as from mechanistic process, hierarchical cultures reflect the values of internal focus and structural controls. Primarily concerned with a stable organizational setting, this culture maintains itself in an orderly way. Sub-goals of this culture include routine measures and procedures for efficient communication, information management, and top management decision-making (Daft, 1992).

Conceptual background linking culture, strategy and environmental scanning

Weick (1985) points out that strategy and culture overlap, and there are many issues in an organization which some consider culture

and others consider strategy. He lists ten properties that are shared between strategy and culture. He concludes from this analysis that, among other things, “strategy and culture may be substitutable for one another” (Weick, 1985, p. 383), albeit in an asymmetrical relationship, because “[c]ulture can be substituted for plans more effectively than plans can substitute for culture” (Weick, 1985, p. 383). Although this statement does not provide managerial guidance it does grant philosophical illumination with regard to possible organizational behavior. It is subsumed that when beliefs and values that make up the culture are more diverse, there is greater need for detailed planning. However, as a consequence of this diversity, the plans may not be implemented as expected.

Weick also concludes that culture and strategy may serve a common function. The similarity between strategy and culture arises from the function of imposing both order and meaning to collected bits of data and actions. Meaning is endowed to the bits of data and actions through a categorization process. Strategies and cultures are then inferred according to the assignment of particulars to categories and the nature of the categories themselves (Weick, 1985). Thus, the significant overlap between culture and strategy makes it reasonable to consider enhancing Deshpande’s culture-oriented model by relating each quadrant to a specific generic strategy.

Furthermore, various studies have investigated whether each specific generic strategy orientation can be associated with a particular environmental scanning approach. The Miles and Snow (1978) generic strategies and environmental scanning techniques have been empirically tested with mixed results. Hambrick (1982) explored the linkage between environmental scanning activities of top executives and the organization’s generic strategy orientation and, in general, found little consistent scanning/strategy linkage. McDaniel and Kolari (1987) found that prospectors and analyzers placed more value on marketing research than did defenders. McKee *et al.* (1989) also found that there is a significant difference in scanning efforts among the various Miles and Snow organization strategy types.

Although not all empirical studies support the association between generic strategy and environmental scanning approach, the study that found no linkage (Hambrick, 1982) can be discounted for several reasons. First, the sample selected consisted of organizations from three industries – colleges, hospitals,

and insurance companies. As Hambrick pointed out, these may not be the most savvy strategists, thus scanning abilities may not be developed sufficiently in these types of organizations for differences to be found. Second, refinements may have been made in research and classification tools between the Hambrick study in the early part of the decade and the studies in the late part of the decade. Third, it is possible that any significant scanning differences were lost in the confusion between the three industries in Hambrick’s study. Both the McDaniel and Kolari (1987) study and the McKee *et al.* (1989) study concentrated on a single industry, and both found support for a linkage. Based on these considerations, we concluded that ample evidence exists to support the existence of some relationship between generic strategies and environmental scanning approaches.

Given the fact that we already concluded that generic strategy should be incorporated into the Deshpande *et al.* (1993) model, the relationship between strategy and environmental scanning also indicates that environmental scanning should also be factored into each quadrant of the model.

The enhanced model

In order to provide a more complete overall model, two enhancements must be made to the Deshpande *et al.* model. The first enhancement involves the incorporation of generic strategy into the model of organizational culture. As Weick (1985) pointed out, generic strategy and culture are clearly intertwined. As such, generic strategy should be included as a characteristic of organizational culture.

The second enhancement requires the addition of environmental scanning methods as a behavioral characteristic to organizational culture. Environmental scanning is an essential behavioral attribute of culture because scanning provides the first step in a chain that culminates in organizational actions (Hambrick, 1982). Further, what is scanned, as pointed out by Jennings and Lumpkin (1992), defines what part of the environment is noticed. Therefore, it is clear that an organization cannot engage in marketing without being aware of the environment. Furthermore, environment drives strategy formulation and assessment of the environment must be conducted.

The significant relationship between organizational culture and strategy, and between generic strategy and environmental scanning methods, is sufficient to justify the

enhancements proposed above. The Y-axis of the model ranges from organic to mechanistic process, which, in effect, reflects the analyzability of the environment. As pointed out by other authors (e.g. Daft, 1992) organic processes become more appropriate as the environment becomes more unanalyzable. Correspondingly, the more stable or analyzable the environment, the more appropriate mechanistic processes become.

The Deshpande *et al.* X-axis plots internal versus market orientation. Active scanning, such as aggressive data collection or development, is associated with market oriented strategies (prospector, analyzer). Passive scanning, which involves little or no actual scanning, but rather an informal monitoring of the environment, is more often associated with internally focused strategies (defender, reactor).

Thus, a strong association can be detected between organizational culture, generic strategy, and the most appropriate environmental scanning approach.

Research propositions

Figure 2 shows the enhanced model. Generic strategies have been added to the organizational culture model, as have environmental scanning methods. Using the enhanced model as a basis, various research propositions can be advanced.

The first proposition is concerned with the upper left quadrant, labeled Clan, in the new model. There are four features that characterize this quadrant. First, the environment is assumed to be unanalyzable. Second, organizations normally utilize an organic management process. Next, the organization employs passive scanning methods. Finally, the organization is internally focused. Based on these characteristics, *P1* is:

P1. Clan cultures commonly utilize an informal environmental scanning approach.

The Market quadrant is the antithesis of the Clan quadrant. This quadrant is characterized by an analyzable environment. Furthermore, organizations use a mechanistic management process, active scanning methods, and have an external focus. Based on this set of values, *P2* is:

P2. Market cultures commonly utilize an analytical mode of environmental scanning.

The third quadrant is labeled Adhocracy. This quadrant is characterized by an unanalyzable environment. Furthermore,

organizations use an organic management process, active scanning methods, and have an external focus. Based on these values, *P3* is:

P3. Adhocracy cultures commonly utilize an exploratory mode of environmental scanning.

At the other extreme from Adhocracy is Hierarchy. This culture is characterized by an analyzable environment. Furthermore, organizations use mechanistic management processes, passive scanning methods, and are internally focused. Therefore, *P4* is:

P4. Hierarchy cultures commonly utilize a disciplined and structured mode of environmental scanning.

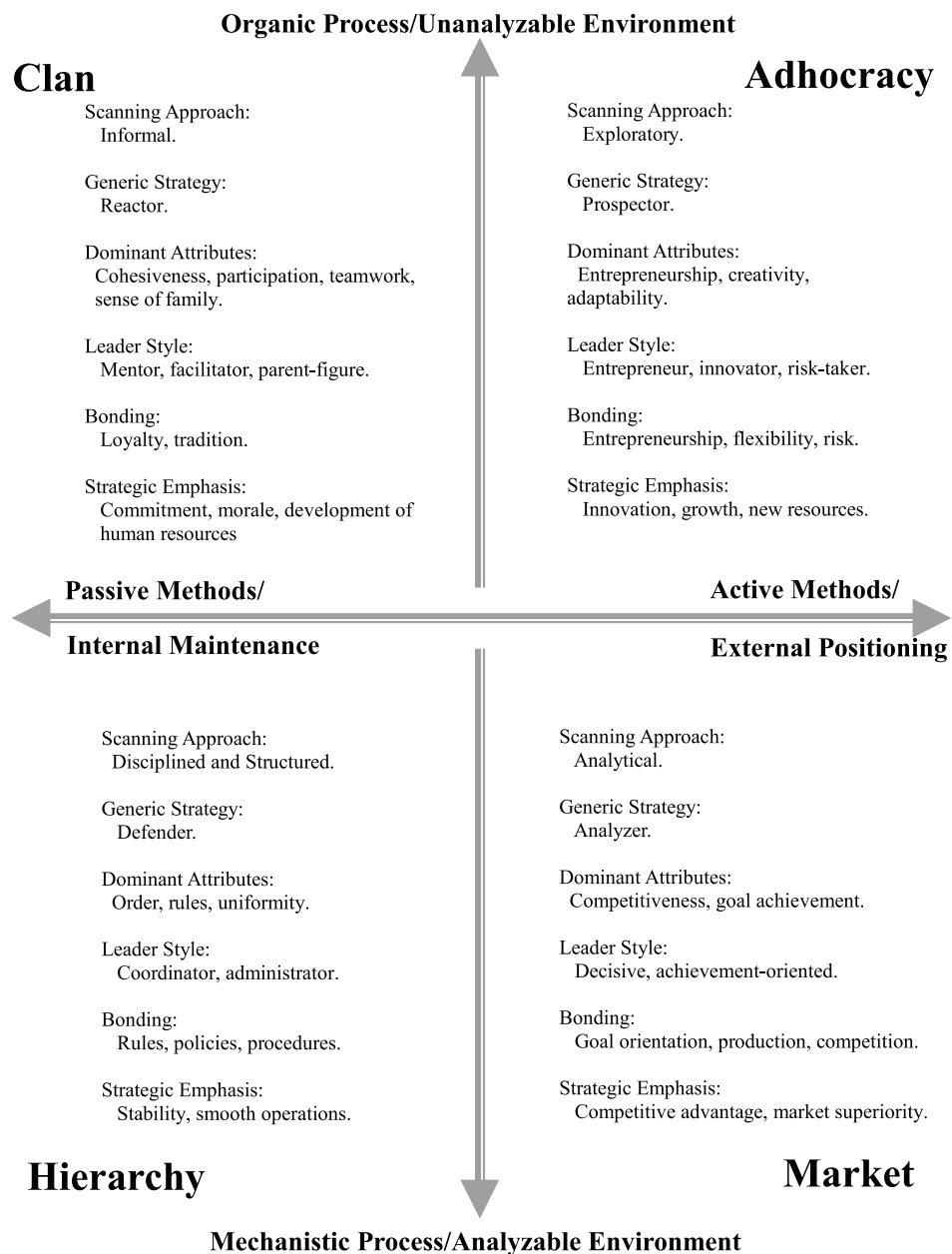
Planning implications

This paper presents a model that incorporates the environmental scanning approach and generic strategy into the various organizational culture types presented by Deshpande *et al.* (1993). This model presents a more complex but perhaps a more explanatory view of how an organization deals with its environments.

This research brought to light additional areas that warrant further investigation. While there has been some empirical evidence that each strategy type utilizes a particular scanning approach, findings have been mixed. It is suggested that further research be done to investigate the robustness of the scanning distinctions between the Miles and Snow (1978) generic strategy organizations. Concurrent with such an empirical assessment, evidence could be collected to evaluate the linkage between organizational culture type and generic strategy. It would be especially valuable to test the idea of co-alignment of scanning, strategy, and organizational culture on an organization's performance.

Clearly managers should pay attention to the linkages proposed, since, if they are correct, the company's orientation in these areas will impact its approach to the marketplace. If a manager operates in one quadrant but utilizes an inappropriate scanning approach, the company will either be missing valuable information or spending money needlessly. For example, a manager in a Clan culture who utilizes an analytical scanning approach has inefficiently committed resources to a scanning method that would be more appropriate in a Market culture where the environment is analyzable and requires an active approach to scanning. Attempts to analyze an unanalyzable

Figure 2
Enhanced model of culture, strategy and scanning modes



environment would be both wasted effort and an over-commitment of resources.

Likewise, if a company has a Market culture but utilizes the informal scanning approaches more suited for a Clan culture with its unanalyzable environment, opportunities to collect vital competitive intelligence will be lost. The amount of information that may be missed could be critical since the analyzable environment of a Market culture environment requires an active scanning method with an external focus.

Another area of concern is that today's business environment is very dynamic and the strategic orientation of a company can

change rapidly simply through a change of leadership, technology, or legal protection. Managers must have an accurate perception of the nature of their organization in order to enable them to react quickly in the event of a major change in the industry or company. The merger of two companies, one with a Clan culture and the other with a Hierarchy culture, would require massive changes in organizational culture, generic strategy, and environmental scanning approach. Unless management is aware of the factors that make up this model, necessary adjustments may not be made and the company may falter as a result.

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