

TOWARDS AN ORGANIC PERSPECTIVE ON STRATEGY

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The strategy field's core issues—the concept of strategy, causal models relating strategy to other constructs, and models of strategic management and choice—have been previously addressed by two key progressions. The mechanistic perspective based on disciplinary-based theories, the design model, and a view of strategy as a planned posture, has provided a unified view, but a narrow and increasingly less pertinent one. The advent of organic developments that included strategy process research, evolutionary and process models, and interactive and integrative views, has provided richness and pertinence, but not a unified perspective. These two progressions marked an epistemological shift from mechanistic to organic assumptions: from discrete to incessant time, from directional to interactive flow, and from differentiated to integrated constructs and models. Building on this shift, this paper proposes an organic perspective that combines the insights and coherence of the mechanistic perspective with the more relevant organic ideas. It makes use of the organic assumptions to advance a view of strategy as an adaptive coordination, introduce the Organization–Environment–Strategy–Performance (OESP) integrative theoretical model, and present an organic model of strategic management. The organic perspective provides a basis for an upgraded, more unified, and better-attuned view on strategy's core issues. Copyright © 2002 John Wiley & Sons, Ltd.

INTRODUCTION

What is strategy? What is strategy related to, and how? How is strategy selected and managed? How should it be? These core questions have been addressed by two broad progressions, distinguished more by epistemological differences than by chronological order. The first development consisted of several disciplinary-based and stand-alone middle-range theories, mainly the SCP (Structure–Conduct–Performance), SSP (Strategy–Structure–Performance) and RBV (Resource-Based View). These theories were used to explain variations in strategy and performance (e.g.,

Rumelt, 1991). Strategy itself has been mainly viewed as a posture and a plan. The design model and the SWOT (strengths, weaknesses, opportunities, and threats) (Andrews, 1971; Barney, 1997) model have been used as the main models of strategic management and strategic choice, respectively. We call this first development the *mechanistic perspective*, for it provides a set of conceptual, explanatory, and prescriptive models that are unified by the Newtonian *mechanistic* logic as their shared epistemological basis.

The mechanistic perspective remains vital to the development of strategy research, teaching, and practice. It has established the centrality of key constructs, questions, and theoretical relationships, and its prescriptive orientation reflects the field's commitment to help firms improve their functioning and performance, and to address managerial concerns. Most significantly, aided by

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shared assumptions, its concepts, theories, and models have mutually reinforced one another, and facilitated better communication, generation, and exchange of ideas. Yet, despite its many contributions and achievements, the tenets of the mechanistic perspective have been increasingly questioned. Its simple assumptions, better suited to a relatively stable and predictable world and to the early stages of the field's development, seem to be at odds with the more complex and constantly changing observed behavior of individuals, firms, and markets. Furthermore, critics have described it as static (e.g., Pettigrew, 1992), linear (e.g., Henderson and Mitchell, 1997), and fragmented (e.g., Schendel, 1994).

Prompted by the limitations of the mechanistic perspective, and inspired by the advent of new ideas in the social and natural sciences, the field's second broad progression saw the emergence and spread of *organic developments*. Key developments included research on strategy formation and implementation (e.g., Quinn, 1980; Mintzberg and Waters, 1985), evolutionary ideas and process models (e.g., Nelson and Winter, 1982; Van de Ven, 1992; Barnett and Burgelman, 1996), the recognition of reciprocal and interactive relationships between strategy and other constructs (e.g., Tirole, 1989; Henderson and Mitchell, 1997), and integrative research (e.g., Baden-Fuller and Stopford, 1994). These research streams have introduced more dynamic and eclectic views of key constructs, offered new views of strategy formation, highlighted the importance of strategy processes especially against rational unitary actor models, and portrayed a more complex view of causality. Moreover, they have shifted the focus from strategic choice to strategic change, and given much more recognition to 'soft' variables and to the messy side of reality.

Collectively, the organic developments represented an important shift in the underlying epistemological assumptions of the mechanistic perspective concerning time, flow, and coupling within and across models. First, the view of time in the mechanistic perspective is *discrete* or synchronic: it focuses on a single occurrence of a set of givens at a particular time. As a result, it is essentially timeless: it pays little attention to past and future, process, lags and duration, and the creation of new entities. By contrast, organic ideas adopt an *incessant* and diachronic concept of time: concepts and relationships are part of continuous processes and

iterated sequences, and entities are created rather than given.¹ Second, the mechanistic perspective contrasts with organic ideas in its *directional* view of flow. It often presents a linear and sequential view of events and causality, and highlights deterministic causes of behavior (Bourgeois, 1984). By implication, it pays less attention to *interaction*, feedback and to multiple, reciprocal, and endogenous influences. Lastly, although early concepts of strategy emphasized its integrative nature (e.g., Andrews, 1971), the mechanistic perspective is characterized by internal *differentiation*: the constructs in both explanatory and prescriptive models are more developed and better specified than the relationships that hold them together. By contrast, organic ideas emphasize *integrated* (i.e., problem-centered, multilevel and relational) views of strategy phenomena and concepts.

The move to organic epistemological assumptions offers several advantages to the field of strategy. First, it reflects a growing appreciation of the complexity and interdisciplinary nature of strategy. Second, it maintains continuity since it builds on, rather than rejects, lower-level mechanistic conceptions (Boulding, 1956). Finally, as changes, conflict, and interdependence are the chief concerns of modern firms and strategy itself, organic assumptions seem to hold a natural appeal. Nonetheless, organic developments have been only partially assimilated into the mainstream of the strategy field. Furthermore, the field has experienced a growing separation between prevalent analytic and prescriptive models and the new concepts and descriptive ideas.

Against this backdrop, and to capitalize on the relative strengths of the two progressions, this paper outlines an *organic perspective* on strategy core issues.² Being *organic*, the new perspective derives its internal consistency from organic epistemological assumptions on time, flow, and construct coupling. Paralleling the mechanistic

¹ A continuous view of time accommodates both continuous and discontinuous notions of change.

² Burns and Stalker (1961) originally used the terms mechanistic and organic to distinguish between different organization structures and management styles required to cope with different environments. We borrow the terms to suggest that different contexts call for different clusters of conceptual, explanatory, prescriptive, and methodological models. We too view the terms as describing points on a continuum rather than a dichotomy of pure types. We find the term organic particularly suitable to our purposes since it combines notions of process, unity, and vitality.

perspective, it provides a unified set of conceptual, explanatory, and prescriptive elements. Particularly, it introduces a concept of strategy as an adaptive coordination of goals and actions. It presents the *Organization–Environment–Strategy–Performance (OESP)* model, an integrative theoretical structure that links different middle-range theories and synthesizes mechanistic and organic ideas. Lastly, it includes an *organic* model of the strategic management process in which the iterative and integrative qualities of the process are stressed. These three parts of the organic perspective are internally compatible, represent the field's continuity and progress, and are better suited to a more complex, interconnected, uncertain and ever-changing world.³

The development of an organic perspective can contribute to the field in several respects.⁴ First, without sacrificing key insights and contributions of the mechanistic perspective and its attention to prescription, an organic perspective can help renew mechanistic concepts and models by aligning them with organic themes. Second, an organic perspective can integrate various research streams that share its epistemological orientation, and foster cross-fertilization of conceptual, theoretical, and analytic models. Lastly, beyond renewal and integration the organic perspective can stimulate new

ideas and applications. Once the organic set of assumptions on time, flow, and coupling have been isolated from their original contributions they can be applied and recombined in ways other than the one described here.⁵

We begin by describing the mechanistic perspective on strategy. We then introduce organic thinking by discussing the development of pertinent research streams. The bulk of the paper is devoted to building on these two developments to propose a three-pillared foundation for an organic perspective on strategy. In conclusion, we summarize the contributions and potential implications of the new perspective, and propose avenues for future work.

THE MECHANISTIC PERSPECTIVE

The mechanistic perspective consists of a concept of strategy, related explanatory models, and managerial frameworks. These three elements have common epistemological assumptions.

A concept of strategy

In the mechanistic perspective, strategy is mainly viewed as a *posture*—a relatively stable configuration—a fit or alignment—between mutually supporting organizational elements, such as activities and organizational structure, and environmental elements, such as a customer group. Two main types of strategy postures are *position* (e.g., differentiation strategy) and *scope* (e.g., vertical integration) (Chandler, 1962; Rumelt, 1974, 1984; Porter 1980, 1991; Wernerfelt, 1984). Strategy postures have been the traditional focus of research on strategic groups (e.g., Cool and Schendel, 1988), diversification (e.g., Montgomery, 1982), and strategy–structure (e.g., White, 1986). In addition, early treatments of strategy, rooted in strategic planning models, have viewed it primarily as a rational *plan*. In this view, which still guides much of the thought in the strategy field, action is purposive and prospective, and strategies are realized as planned (Mintzberg, Ahlstrand, and Lampel, 1998).

⁵ Van de Ven and Poole (1995) present another approach to model building that bears some similarities to ours. They extract four process models from existing studies and show how they can be used to generate new applications.

³ We see global strategic management as a distinctive but integral part of strategy and strategic management. Therefore, the organic perspective also pertains to globalization and related issues.

⁴ Our work follows the trail of prior works that stressed the importance of dynamics, process, integration, and mutual determination (e.g., Bourgeois, 1984; Haspeslagh and Jemison, 1991; Porter, 1991), or that infused prescriptive frameworks with descriptive ideas (e.g., Quinn, 1980; Bowman and Hurrey, 1993; MacIntosh and MacLean, 1999). In addition, it is both complementary and orthogonal to panoramic views of the field of strategy (Rumelt, Schendel, and Teece, 1994; Mintzberg, Ahlstrand, and Lampel, 1998; Ghemawat, 1999). We differ from these prior contributions in that we do not simply provide a review, explain a particular phenomenon (e.g., acquisitions), develop a singular model, or advocate a particular theoretical viewpoint (e.g., complexity theory). Rather, we make sense of the field's evolution by using epistemological as opposed to chronological, theoretical or conceptual lenses, focus on development and not merely advocacy, provide a perspective on broad issues, and highlight both time and integration. Moreover, though we provide a broad review of the field, it is not meant to be exhaustive and fully representative, but rather to present certain developments we see as central, and serve as a logical step for developing the new perspective. We do not intend to propose a fully developed new theory of strategy or strategy phenomena either. Rather, we aim to illustrate one way in which the consistent use of a small set of epistemological assumptions can aid in developing more compatible and relevant concepts and models for strategy research and practice. To this end we sketch a preliminary, yet self-contained, structure upon which future extensions can be made.

Explanatory models of strategy

Two concerns of mainstream strategy research are to explain what determines firm performance, and to identify what affects firm strategy. Three research programs have been particularly influential in addressing these questions. The *Structure–Conduct–Performance* (SCP) paradigm (e.g., Bain, 1956) and its derivative, the industry structure model (Porter, 1980), view the external environment as a key determinant of strategy and performance. In the SCP model, the main causality flows from industry structural variables to firm conduct (i.e., strategy) and then to firm and industry performance. Porter's model retained the basic flow of the SCP but, rather than focusing on the industry, used the model to discuss the strategies open to the firm (e.g., positioning strategies) to improve its performance.

The *Strategy–Structure–Performance* (SSP) paradigm highlights the significance of factors complementary to strategy, such as organizational structure, to firm performance. Originating in Chandler's (1962) classic study of the growth of large American firms, the model proposes that different growth strategies are driven by the accumulation and deployment of internal resources, and are matched by different internal structural arrangements such as the functional and multidivisional organizational structures. Chandler's theoretical model particularly implied that the match between strategy and structure results in better performance. This proposition has guided subsequent studies (e.g., Stopford and Wells, 1972; Rumelt, 1974; Franko, 1976; Miles and Snow, 1978), has been integrated into contingency research in organizational theory (e.g., Galbraith and Nathanson, 1978), and has been extended by configuration theorists to other organizational processes (e.g., Miller and Friesen, 1978). This literature provides a causal model that relates strategy, organizational structure (and processes), and performance.

A related and more recently embraced model is the *Resource-Based View* (RBV). Anticipating Chandler's work, early work in RBV delineated a process theory of the role of resources in firm growth (Penrose, 1959). Several more recent variants of the model have been proposed (e.g., Wernerfelt, 1984; Teece, Pisano, and Shuen, 1997), all of which complement the external view of the SCP by their mirror emphasis on internal firm-specific

attributes that affect strategy and performance. The RBV sees certain resource attributes, such as inimitability, uniqueness, and flexibility, as enabling certain strategies (e.g., cost leadership), and contributing to sustained competitive advantage (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Teece *et al.*, 1997).⁶

Collectively, these different models of the mechanistic perspective see firm performance as affected by the environment and by firm strategy and other internal attributes, such as resources and organizational structure. Strategy itself is influenced by internal firm attributes and by attributes of the environment. This basic causal model describes the main relationships between central constructs in strategy research: organizational resources, environment, strategy, organizational structure, and performance. It also informs corresponding models of strategic management and choice.

The design approach to strategic management and choice

What implicitly provided the glue for integrating different causal models of strategy was the *design model*, a prescriptive framework widely used as a guide for practice and teaching (Andrews, 1971; Porter, 1980; Barney, 1997). The framework describes the *strategic management process*—the actual steps and subprocesses of a firm's strategy that need to be managed to maintain or improve the firm's performance. In the standard design model, the strategic management process generally consists of two main subprocesses: strategy formulation and strategy implementation. The *strategy formulation* subprocess is concerned with analyses of the external and internal environment and the choice of strategy at the corporate, business, and functional levels. *Strategy implementation* comprises a series of primarily administrative activities and includes the design of organizational structure and processes (Chandler, 1962), and the absorption of policy into the organization's social structure (Selznick, 1957: 91–107).

⁶ Another important stream of research is Transaction Cost Economics (TCE) (e.g., Williamson, 1975). Although the theory is not considered as one of the founding models of strategy in looking at a firm's resources, boundaries, and structure, it has significantly contributed to each of the three streams discussed here. More recent work has attempted to apply the theory to more central concerns of the field (e.g., Williamson, 1999).

Each of the main research programs reviewed has contributed to the design model. Derived from the SCP are the five forces model and its dynamic counterpart—the industry life cycle model—which became the dominant models for analyzing the external environment (Porter, 1980). The SSP has provided a theoretical basis for the formulation–implementation link in the design model. In addition, by focusing on internal firm attributes, the RBV model, together with the value chain model of firm workflow activities (Porter, 1985, 1996), has become a standard tool for analyzing the internal (i.e., organizational) side in the design model (Barney, 1997).

The SWOT model is often used to prescribe the strategic choice (i.e., strategy formulation) part of the design model. In this model, strategy needs to match the firm's internal resources and distinctive competencies with environmental opportunities and threats, so as to better meet overall goals and objectives (Andrews, 1971). The decision rule used is to choose a strategy that capitalizes on the firm's strengths, fixes its weaknesses, exploits its opportunities, and defends or neutralizes threats (Barney, 1997). Strategy needs to exhibit *external consistency*—firm resources need to be matched with environmental opportunities, and *internal consistency*—a fit between strategy and organizational elements. In addition, strategy needs to be in line with managerial values and with societal expectations (Andrews, 1971; Porter, 1980). The different research programs reviewed have also provided support for these different forms of fit (e.g., Chandler, 1962).

Common epistemological underpinnings

Despite differences in content and emphasis, the field's main issues—the nature of strategy, its relations, and the ways it is managed and selected—are addressed in the mechanistic perspective in a consistent and mutually reinforcing manner. A view of strategy as a position or posture implies that strategic choice is mostly a selection among static configurations. Furthermore, the view of strategy as mainly determined by the industry environment, implicit in the SCP, is paralleled in the design model by the relative neglect of strategies that change the environment (e.g., Child, 1972). Finally, the SWOT model of strategic choice is now characteristically accompanied by explanatory models of the external environment

(e.g., Porter, 1980) and of internal resources (e.g., Barney, 1991). A prime reason for this coherence is the shared but largely implicit views on time, flow, and coupling. These were influenced to a large extent by Newtonian mechanics and its application to microeconomics, and by the ideas prevailing in the behavioral and economic disciplines when the formal study of business strategy began.

Concept of time: discrete

In the mechanistic perspective firm strategy, the environment, and the firm's stock of resources, structure, and work flow technology are often treated as given discrete categories or states that coalesce to create static efficiency (e.g., economies of scale), fit, and configuration (e.g., Galunic and Eisenhardt, 1994). Strategic management is viewed as a one-time sequence of formulating and implementing a single choice rather than a continuous process. Strategy-making mechanisms are assumed to be in place, and learning, history, and processes are downplayed. Strategy formulation and implementation activities are condensed in time and their duration is inconsequential. The choice part of the model often involves once-and-for-all choices for which past and subsequent choices are not considered, and where there is no distinction between initiation of a new alternative and the continuation of an existing one (March and Simon, 1958).

The discrete view of time is also evident in the research models being used. Most mechanistic studies use *variance* models, cross-sectional in design. Variance models are concerned mainly with *what* the relative explanatory power of different determinants of abstract entities (i.e., strategy and performance) are rather than *how* these entities are formed (Mohr, 1982). Although process explanations featuring the role of history and learning were central in the founding of the main theories (e.g., Selznick, 1957; Penrose, 1959; Chandler, 1962), they have been largely neglected by subsequent research.

Underlying this particular view of time and the focus on variance models is the idea of *efficient historical process*—an evolutionary process that moves rapidly to a unique steady-state equilibrium solution, conditional on current environment conditions, and thus independent of the historical path. A static alignment at a given time is the product of a rapid optimizing process. The process is assumed

to lead to improvement of fit and ultimately to the one most suitable (March, 1994).

Concept of flow: directional

In early versions of the main underlying research programs causality ran from environment to strategy and performance (in the SCP model), from strategy to structure (and performance) in the SSP model, and from resources to strategy and performance in the RBV model. Moreover, as postures, strategies are mainly responses to given constraints rather than means to influence them or create new environments (Porter, 1980). Additionally, at its core, positioning analysis often assumes no responses from competitors and other players (Ghemawat, 1991), and value chain analysis largely represents sequential interdependence (Stabell and Fjeldstad, 1998). The sequential flow of the design model and the view of strategic choice also illustrate directionality. Feedback loops are either implicit, as from implementation to formulation, or absent, as in the case of performance influences on other elements. Choice constitutes a constrained optimization problem where the choice set is exogenous and given (Porter, 1991).

Coupling within and across models: differentiated

Because of their disciplinary and historical roots, the main models have been developed from the ground up as fragmented middle-range theories rather than as lower-level theories stemming from an integrated overview of strategy. Moreover, each of the research programs has focused on a different element of the strategy picture: environment, resources, and organizational structure. This division of labor between programs of research has facilitated scientific progress—but at a price (Schendel, 1994). The SCP and the industry structure model have been criticized for lacking a theory of the firm's organization (Teece, 1984) and as generally ignoring the inner context of strategy (Pettigrew, 1987). The SSP has been criticized for not paying attention to competition (Galbraith and Nathanson, 1978), and research in RBV has only recently begun to explore the mutual dependence of internal resources and competition (Levinthal and Myatt, 1994; Priem and Butler, 2001). By and large, theoretical differentiation has considerably hampered the recognition of multiple

and reciprocal causality between these distinct elements (Henderson and Mitchell, 1997).

This fragmentation has close parallels in the design model. Despite the recognition that strategy formulation and implementation are interrelated (Andrews, 1971), the design model describes them as separate activities (Mintzberg *et al.*, 1998). Strategy implementation has been viewed as administrative rather than analytic activity involving choice, and external aspects of managing change (e.g., Chen, 1996) have been treated separately from internal ones (e.g., Quinn, 1980).

Panel A of Table 1 summarizes the underlying influences and context of the mechanistic perspective. It then focuses on the mechanistic epistemological assumptions and their imprints on the way the perspective approaches each of the field's main concerns.

TOWARDS AN ORGANIC PERSPECTIVE: PRIOR ORGANIC DEVELOPMENTS

Alongside the progress made in the field in particular content areas grew several streams of ideas that questioned, complemented, and partially adapted the prevailing approaches at a more fundamental level. Particularly challenging and extending in their impact on the core assumptions of the mechanistic perspective on time, flow, and coupling, and its predominately rational and prescriptive tone, were research on strategy processes, evolutionary and process models, models highlighting interaction, and integrative research.

Strategy processes

Complementing the focus of mechanistic models on strategy as a fully blown and perfectly realized 'product', grew streams of research that focused on the processes of strategy formation and implementation. These topics were by and large studied by behavioral and organizational theory researchers and had a more descriptive and dynamic tone (Hirsch, Friedman, and Koza, 1990; Schendel, 1994; Mintzberg *et al.*, 1998). Complementing the SSP model, studies of strategy implementation and strategic change have focused on the administrative actions and processes involved in initiating, developing, and institutionalizing strategy-related changes. Joining earlier organizational development approaches to management of change (e.g.,

Table 1: Contrasting the mechanistic and organic perspectives
Epistemological assumptions provide unity within each perspective and distinct views on the strategy field's core issues

	Panel A	Panel B
	<i>Mechanistic perspective</i>	<i>Organic perspective</i>
	<p>Context: stable and predictable environment, early stages of the field's development</p> <p>Key influences: Newtonian mechanics logic and ideas prevailing in the behavioral and economic disciplines at the field's formation</p>	<p>Context: dynamic and uncertain environment, advanced stages of the field's development</p> <p>Key influences: new ideas in natural and social sciences, organic developments in strategy (strategy process research, evolutionary and process models, interactive and integrative research) and selected key mechanistic ideas</p>
	Unifying epistemological assumptions	
Strategy's Main Concerns:	<p>Discrete time: Synchronic—a single occurrence of events at a point in time</p> <p>Directional flow: Linear, deterministic and sequential view of events and causality</p> <p>Differentiated constructs: Narrowly defined and poorly integrated constructs</p> <p>Restricted view</p>	<p>Incessant time: Diachronic—focus on sequences, history, evolution, voluntarism and the creation of new entities</p> <p>Interactive flow: Reciprocal causation, interaction and feedback</p> <p>Integrated constructs: Integration within and across constructs, levels and models</p>
What is strategy?	A <u>plan and a posture</u>	Adaptation through influencing the environment.
Explanatory (causal) models	<p>SCP, SSP, RBV</p> <p>Static constructs. Reductionism. Variance models (why questions). Efficient history</p> <p>Linear flow. Single causes and determinism</p> <p>Disciplinary-based middle-range theories. Key concepts narrowly defined and poorly connected</p>	<p>Multi-causality. Co-evolution. Strategy effects on environment. Performance as independent variable.</p> <p>History and (co)evolution. Self-influences. Paths. Process models. How and why questions. Imperfect adaptation</p> <p>Consolidated and integrated constructs. A framework to link disciplinary-based models and highlight new linkages</p>
Model of the strategic management process	<p>Design model; SWOT; Rational Unitary Actor</p> <p>Sequential activities of formulation and implementation.</p> <p>Internal and external aspects of managing change are unlinked</p>	<p>Feedback. Emergent strategies. Learning. Dialectics between formulation and implementation. Strategy facilitation. Behavioral aspects of decision-making</p> <p>Emphasis on linkages and integrated process. Implementation planning. Organization and environment interact with each subprocess. Managing internal and external change</p>



Lewin, 1951), works such as Quinn (1980), Pettigrew (1985), and Baden-Fuller and Stopford (1994) have dealt with the political, cultural, and psychological aspects of strategic transformation. These and related studies have highlighted the difficulties of realizing intentions, the interactive nature of internal change, and the importance of realistic and people-sensitive strategic initiatives (Ansoff, 1984).

A more direct challenge to mechanistic ideas came from studies of strategic choice and strategy formation. Most research underlying the mechanistic view is guided by the concept of a decision-making process based on a planned and rational unitary actor model (Rumelt, Schendel, and Teece, 1994). In this model, decision-making processes are viewed as black boxes that have no consequences for the decision itself (Simon, 1986). The choice is guided by the comparison of discrete alternatives (Pettigrew, 1992; March, 1994; Dosi *et al.*, 1997). By contrast, strategic decision making and cognitive research (e.g., Mintzberg, Raisinghani, and Theoret, 1976; Reger and Huff, 1993) have suggested that the decision-making process matters to the plans and decisions reached (Simon, 1986). Sociopolitical influences such as negotiation and procedural justice, learning, and other information processing activities can affect the kinds of strategies and plans selected, and consequently also affect performance outcomes (e.g., Hart and Banbury, 1994). Choices are viewed as nested (e.g., March, 1994) and multistaged (Brehmer, 1992) rather than *discrete*, and choice sets can be modified endogenously (Kleindorfer, Kunreuther, and Schoemaker, 1993).

Other studies have highlighted the role of vision and cognition, and of other cultural, social, and political influences in strategy formation (e.g., Chakravarthy and Doz, 1992; Pettigrew, 1985). They emphasized the incremental nature of decision making, initially as a disjointed process (Lindblom, 1959), and subsequently as a more integrated one (Quinn, 1980). Quinn's (1980) model particularly blended descriptive ideas of an incremental and nonlinear process with the logical and prescriptive marks of more rational models. Bower (1970) and Burgelman (1983) added a view of strategy formation as dialectic involving rationalization and structuring by top management and strategic initiatives of lower levels in the organization (Noda and Bower, 1996).

A related branch of strategy inquiry has highlighted the significant role of strategic leadership in the strategic management process (e.g., Hambrick and Mason, 1984). This stream of research has highlighted the role of the CEO, board, and top management in formulating and implementing strategies (e.g., McNulty and Pettigrew, 1999). It served as a counterpart to the mechanistic and rational views of strategy making by highlighting human engagement and multiparty (e.g., board, consultants) interaction in these processes, and the critical role of strategic leaders in mediating the firm's internal and external contexts.

A final and most significant development along these lines suggests that realized strategies can be a result of prior plans but can also be an *emergent* stream of actions recognized as a *pattern* after the fact (Mintzberg and Waters, 1985). Rather than being distinct processes as depicted in the design approach, formulation and action (i.e., implementation) are better viewed as constantly coevolving: following and affecting each other through a process of strategic learning and control. Good strategies can be formed and discovered by experimenting and observing the organization's actions rather than by conducting formal analyses of strengths and opportunities (Mintzberg *et al.*, 1998). In contexts where plans proved inadequate at times, such as in an increasingly turbulent environment, the concept of emergent strategy offered a viable alternative.

Ultimately, these various contributions uncovered a persistent tension in the field: strategy is an attempt to construct a rational and predictable world in the face of a reality that quite often resists it.

Process approaches and models

A second organic development stems not so much from dealing with topics largely ignored by the mechanistic approaches, but rather from a different orientation to process and time. It particularly includes the rise of new evolutionary models of the strategy process, and the growing interest in viewing strategy in dynamic and process terms (Porter, 1991; Melin, 1992; Academy of Management, 1997). Inherent to models of evolutionary processes is the idea that '*history matters*' (Nelson and Winter, 1982; North, 1991; March, 1994; Arthur, 1995). Some of these models suggest that particular paths may influence outcomes examined

at a particular time, and that history does not necessarily work efficiently to produce the optimal configurations and alignments suggested by the mechanistic views. In contrast to the traditional model of the environment (e.g., industry structure), more attention is given to market processes (Nelson and Winter, 1982; Dosi *et al.*, 1997). Static conceptions of resources have been augmented by models that highlight process and learning (e.g., McGrath, MacMillan, and Venkataraman, 1995; Teece *et al.*, 1997). Similarly, studies of organizational structure have shifted the focus to its evolutionary nature (e.g., Galunic and Eisenhardt, 1995), and to organizing—the processual quality of organizational systems and participants (e.g., Weick, 1969; Pettigrew and Fenton, 2001).

A related development is the advent of action-based notions of strategy. In the new evolutionary and process models, strategy involves more than a static position in the marketplace (Inkpen and Choudhury, 1995), and includes paths, moves, and actions (Pettigrew, 1992). Models of strategic interaction (Chen, 1996), real options (e.g., Bowman and Hurrey, 1993), commitment (Ghemawat, 1991), and dynamic capabilities (Teece *et al.*, 1997) still see strategy as being subject to planning, but highlight its continuous and path-dependent nature. By highlighting the idea that firms need to conduct experiments and not only analysis and planning, recent approaches have further promoted a more active view of strategy (e.g., Miller and Chen, 1996; Brown and Eisenhardt, 1998).

Process models and designs have moved the focus from *what* determines strategy and performance to *how* they are determined (Mohr, 1982). The new models do not necessarily reject the idea of steady states and strategic positions but rather seek to explain firm success and failure by looking at historical developments, and observing the pace and path of change (Hodgson, 1993; Barnett and Burgelman, 1996). They examine how initial conditions, timing, managerial choices, decisive moments, learning, and path-dependent processes enable and constrain current states and in turn provide platforms for future developments (Doz, 1996; Mitchell, 1989; Lieberman and Montgomery, 1998).

Interaction

With the growing appreciation of *interaction* and *reciprocal causation* of key constructs, feedback

loops have been added in each of the main research programs of the mechanistic perspective. They accounted for firm conduct and firm structure effects on industry structure (Caves *et al.*, 1980; Caves, 1980; Porter, 1991), highlighted the effects of organization structure on strategy (Hall and Saias, 1980), and recognized the effects of strategy and environment on resources (Porter, 1991; Rumelt *et al.*, 1994). These latter new linkages in particular have pointed to new connections *across* the original models. The focus on strategic (external) interaction is also the main feature of the game theoretical models in the new Industrial-Organization (I-O) economics (Tirole, 1989; Brandenburger and Nalebuff, 1996). Models admitting interaction view capabilities, competition, and performance as both affecting and being affected by strategy, and are less concerned with the differential contributions of resources and environment to performance (e.g., Henderson and Mitchell, 1997). Differences between firms are traceable not only to their contemporary conditions, but also to the history of interactions between them and with other actors (March, 1994).

Reciprocal causality has also penetrated the design model of the strategic management process. It is implicit in the notion of dynamic fit (Itami and Roehl, 1987). It is also evident in the dialectic view of formulation and implementation (Burgelman, 1983; Mintzberg and Waters, 1985). Finally, it is represented in the renewed interest in internal firm attributes, such as organization structure, culture, and decision processes, as important influences on, rather than derivatives of, strategy formulation (Barney and Zajac, 1994).

Integrative works

A final set of organic developments has helped to counteract the growing proliferation of alternative views and approaches to strategy, and to emulate earlier works that provided a more holistic picture of strategy (e.g., Chandler, 1962). In addition to the integration gained by the increased recognition of reciprocal causation, integrative works have offered more eclectic views of concepts and phenomena, linked previously disconnected constructs and levels of analysis, and attempted to further the bridging of fragmented models.

Examples of such integrative work are the development of comprehensive models of business

phenomena such as acquisitions (Haspeslagh and Jemison, 1991) or turnaround (Baden-Fuller and Stopford, 1994). Also included is the work of configuration theorists (e.g., Miller and Friesen, 1978), which extended earlier notions of alignment to show how environment, strategy, structure, and other organizational attributes coalesce into distinct and episodically changing archetypes. Finally, several works have explored new ways to merge behavioral and economic approaches (Barney and Ouchi, 1986), to bridge across multiple levels of analysis (Pettigrew, 1985), and to integrate prescriptive and descriptive models (e.g., Bowman and Hurrey, 1993; MacIntosh and MacLean, 1999).

Common epistemological underpinnings

Although some of these organic developments came from within the field, others were influenced by advances in the natural sciences, particularly in modern physics (McKelvey, 1997; MacIntosh and MacLean, 1999), and in the social sciences (e.g., Adam, 1990; Sztompka, 1993) as exemplified by evolutionary ideas in economics (Hodgson, 1993), and by the move in organizational theory from rational to natural views on organizations (Scott, 1995) and towards process models (Van de Ven and Poole, 1995). Common to these diverse developments in the organic wave is a shift in the underlying epistemological assumptions related to time, flow, and coupling found in the mechanistic perspective. The new ideas have emphasized time as *incessant* and diachronic: concepts and relationships are part of continuous processes and dynamic phenomena, and entities are not fixed but are rather created and changed. History matters in the sense that prior events and developments condition current choices, and action, human agency, and social processes are central. In the organic view *interaction* and multiple and mutual influences are highlighted; there is more room for actors' discretion and for endogenous developments. Finally, the new ideas emphasize interdisciplinary and *integrated* views of strategy phenomena and concepts, particularly depicting and explaining phenomena, while being sensitive to their interdependent social, economic, and informational aspects, and highlighting linkages within and across levels of analysis.

TOWARDS AN ORGANIC PERSPECTIVE: THREE PILLARS

If the mechanistic perspective provided a shared epistemological base, the advent of the organic developments has brought the field much more relevant and enriched approaches to its core issues. Despite the growing recognition in the field of the relevance and utility of the organic ideas, they have not managed to change the mechanistic perspective's more secure yet increasingly fractured 'deep structure'. Consequently, the field's transition away from fragmentation, stasis, and linearity has remained incomplete and uneven.

For example, Porter's (1996, 1997) reflection on the concept of strategy, which includes several dynamic extensions, still retains a view of strategy as a planned and stable position, and suggests a linear causal flow running from environment to position (i.e., strategy) to internal organization. Similarly, SWOT analysis, rooted in mechanistic ideas, still remains a primary consulting tool (Hill and Westbrook, 1997) and serves as an organizing framework for research and teaching (Barney, 1997). Organic ideas have made more mark on the mechanistic perspective's concept of strategy and theoretical models than on its analytic models. Moreover, the independent and disciplinary roots of the main mechanistic models have left linkages across models less specified. Against this backdrop, an organic perspective can further exploit the generative power of the organic assumptions to facilitate the transition to more dynamic and integrated approaches to the field's core issues. We proceed by developing three related building blocks that parallel the main elements of the mechanistic perspective: a concept of strategy, an integrative theoretical model, and a model of the strategic management process.

A concept of strategy

A natural starting point and a linchpin to the other two pillars of the organic perspective is the concept of strategy. Extending earlier definitions (Chandler, 1962; Andrews, 1971; Porter, 1980; Quinn, 1980; Mintzberg and Waters, 1985; Itami and Roehl, 1987; Bowman and Hurrey, 1993; Brown and Eisenhardt, 1998), we define a firm's strategy as *the planned or actual coordination of the firm's major goals and actions, in time and space, that continuously co-align the firm with its*

environment. The firm's strategy co-aligns it with the environment by building on and modifying the firm's internal attributes and forces to respond to, and influence, environmental conditions and developments. In short, strategy is co-aligning or *adaptive coordination*. This definition establishes three interrelated points: strategy emphasizes the firm's behavior over time and includes major goals and actions; it includes coordination in space and time, of which planned coordination is just one special case; and it deals with adaptation, which includes both responding to and influencing the environment. Each of these points is elaborated below.

Goals and actions

Strategy includes both *goals* and *actions* (Chandler, 1962; Andrews, 1971; Porter, 1980). Goals 'state what is to be achieved and when results are to be accomplished, but do not state how the results are to be achieved' (Quinn, 1980). Actions are a general label for bundles, sets, or sequences of resource deployments, initiatives, responses, moves, deals, investments, and developments. They include firm 'conduct' or external (i.e., interorganizational) actions as viewed in the SCP and in the new industrial organization literature (e.g., Shapiro, 1989), political and legal actions, and major internal administrative actions. This part of the definition emphasizes what the firm does over time: its actions and behaviors.

Goals and actions correspond to three traditional elements of strategy content (i.e., strategic choice): *goals* (e.g., vision), *postures* (e.g., scope or competitive position), and *moves* (e.g., joint ventures). These elements constitute a means-ends hierarchy (Simon, 1976), in which postures are intermediate goals coordinated by higher-level goals (e.g., profitability) and major policies that affect the firm's overall direction and viability (Quinn, 1980). Postures, in turn, guide lower-level policies and actions, such as new product development and human resource management (Porter, 1980). Specific moves are means to achieve goals directly or indirectly through the creation, sustenance, and change of postures, or through changes in the firm's resource mix.⁷ In this means-ends

⁷ The hierarchical and recursive nature of strategy implies that a strategy can be viewed as a part of another strategy, as a stand-alone concept, or as including other strategies. This may require

chain, higher levels in the hierarchy change less frequently. They provide direction, integration, and consistency for lower levels, which constitute more detailed means and actions for reaching ends. Yet, despite this hierarchy, the relationship between strategy and tactics is dialectical rather than linear: available means constrain strategy (Harkabi, 1997) and lower-level managerial initiatives can converge into and shape higher-level strategies (Bower, 1970; Burgelman, 1983).⁸

Planned and actual coordination

Coordination is a term used to distinguish strategy from random behaviors and completely autonomous actions (e.g., Quinn, 1980; MacCrimmon, 1993). Strategy coordinates goals and means, internal resources and administrative infrastructure, specific courses of actions, and internal and external aspects of managing change. A firm's coordinated action (i.e., realized strategy) can be based on a mix of coordinating mechanisms (Thompson, 1967). It can be recognized retrospectively as a *pattern* in a stream of actions (Andrews, 1971; Quinn, 1980; Mintzberg and Waters, 1985). Coordinated action can be guided by a *plan* (i.e., intended strategy) in which long-term goals, intentions, and means are specified prior to actions. It can be centralized and stem from core managerial values or from a guiding sense of purpose. Alternatively, it can be based on improvisation, mutual adjustment to internal and external developments, or the (unexpected) interaction of agents (e.g., individuals) responding to simple rules.⁹

Strategy also includes both the firm's location and direction within the environment. Spatial coordination, or strategy states, and temporal coordination, or strategy paths, are therefore complementary facets. *Strategy states* (i.e., postures) represent a view of the firm's coordinated

us to view strategy also in relation to other potentially related strategies.

⁸ We see the idea that goals always dictate everything else as misguided. Rather, in some circumstances, intentions can be more malleable than resource stocks or environmental contingencies. Consequently, we view goals not only as constraints on subsequent decisions and strategies but also as variables.

⁹ We prefer to emphasize coordination and integration rather than pattern as a distinguishing characteristic of strategy. Patterns in action can generally result from three sources: random action, accumulation of incremental, path-dependent, and locally adaptive individual steps (such as experiments), or grand design. In our view, a pattern created by random actions, even one that helps the firm adapt, does not constitute a strategy.

resource deployments and its state of alignment with the environment frozen at a point in time. *Strategy paths* and trajectories represent the development over time of coordinated action sequences or moves. Both states (e.g., a firm's international diversity posture) and paths (e.g., a firm's internationalization path) are a confluence of the firm's designed and emergent strategies.

Continuous co-alignment

The firm's internally coordinated goals and actions are anchored in its *continuous co-alignment* with its environment (Thompson, 1967; Porter, 1991). Co-alignment is viewed both as a process and as a relatively constant and superordinate goal, coordinating other intermediate goals and lower-level actions, but not necessarily as an outcome obtained. Co-alignment is sustained through actions aimed at creating, (re)defining and integrating the firm's domains, through the firm's navigation and (re)positioning within each domain, and through changes in the firm's resource mix, which supports, and is influenced by, the firm's domain and navigation strategies. In contrast to steady-state alignment, the co-alignment process is ongoing and dynamic and consists of a series of ever-changing games (Porter, 1991).

Key to the notion of co-alignment is the idea of mutual influence. The firm both adapts to its context, and at times adapts the context to it (Pfeffer and Salancick, 1978; Bourgeois, 1984; Itami and Roehl, 1987; Porter, 1991). The firm needs to manage—that is selectively identify, respond to, and influence, internal and external *constraints*—historical, organizational, and environmental actors, attributes, forces, and developments—which define and limit for a meaningful period of time what it can successfully achieve (Pettigrew, 1987; Ghemawat, 1991). It needs to strike a *dynamic balance* in allocating its resources between responsive and defensive actions, and more entrepreneurial ones such as innovating, influencing sources of uncertainty (e.g., government regulations), and changing the rules of the game (Brandenburger and Nalebuff, 1996).

Summary and contribution of the definition

The three elements of the definition clearly establish strategy at the intersection of a specific

content (goals and actions), mode of behavior (coordinated), and context (adaptation). Goals and actions define what is included in strategy. Coordination distinguishes strategy from other noncoordinated behaviors—even those that are adaptive—yet allows for multiple forms of coordination to be included. Lastly, adaptation suggests that not all coordinated behaviors are included (Meyer, 1991). It therefore provides external anchoring to otherwise closed-system forms of coordination.

The definition also blends mechanistic and organic ideas. It includes mechanistic conceptions of strategy as postures, states, and plans. However, by integrating organic ideas, such as emergent strategy, it portrays strategy as less rigid, linear, static, individualistic, and prospective. The definition further utilizes the three defining characteristics of the organic perspective. Particularly, it emphasizes *incessant* adaptation and temporal and emergent coordination; it is *interactive* and emphasizes mutual and dialectic influences; and it *integrates* external and internal actions, multiple coordination modes and multiple strategy levels.¹⁰

The OESP explanatory model

The second pillar of the organic perspective, and parallel to the mechanistic perspective's main theoretical models, is the Organization–Environment–Strategy–Performance (*OESP*) model, a meta-theoretical framework. The purpose of the model is to organize and synthesize existing middle-range theoretical models and to stimulate the development of new ones. In addition, the model, described in Figure 1, aims to inform and reinforce analytic models of strategic management and choice. We next describe the major constructs in the *OESP* model, their key relationships, and the main implications of the model.

Major constructs in the OESP model

In addition to the already-defined concept of strategy, the other major constructs in the *OESP* model

¹⁰ Our concept is generally consistent with other frequently used definitions of strategy such as Mintzberg's position, ploy (included as a move in our terminology), perspective, plan, and pattern (5 P's), and adds path as a sixth P strategy.

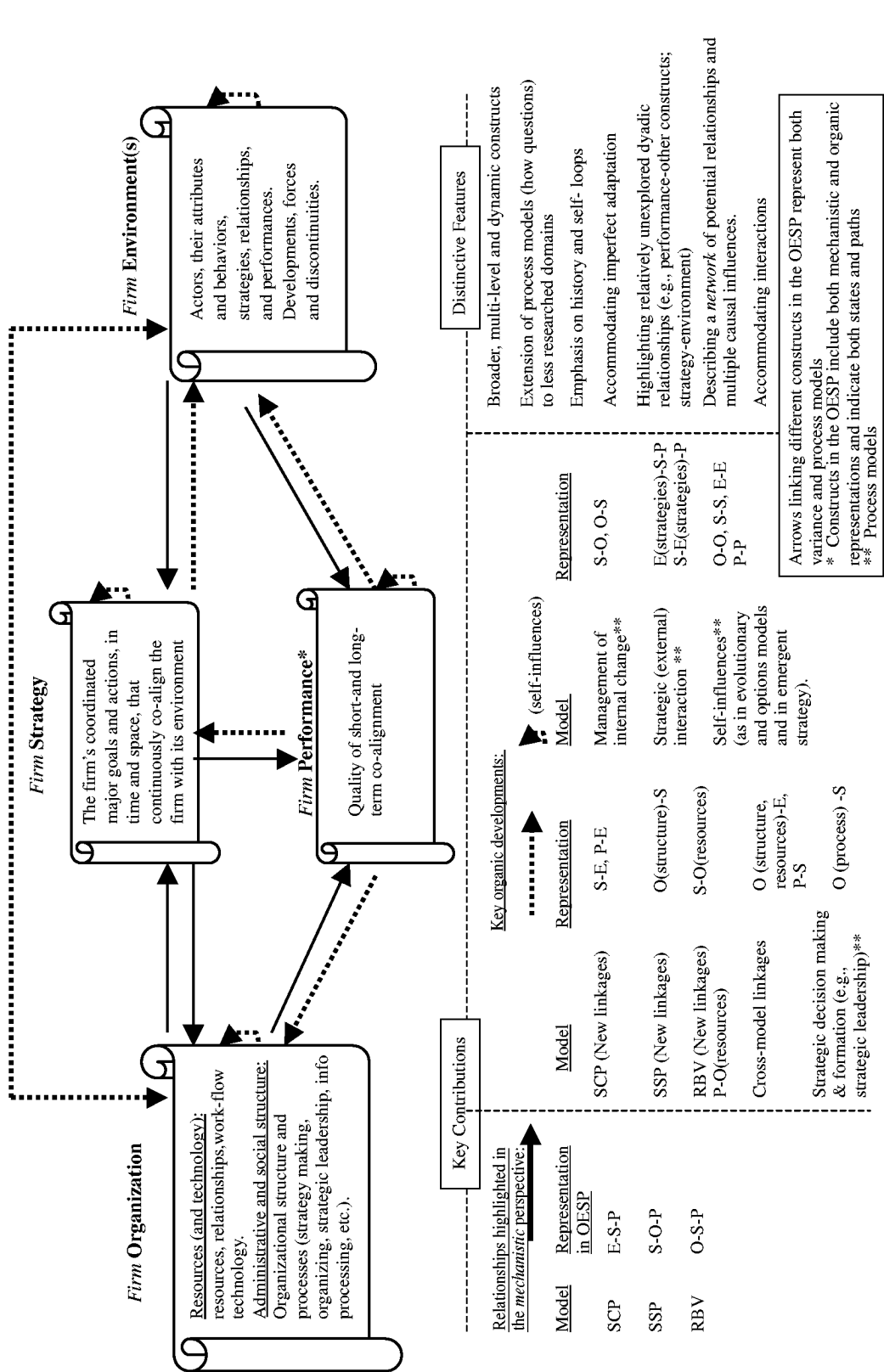


Figure 1. The Organization – Environment – Strategy – Performance (OESP) model. Key contributions of the mechanistic and organic models, and distinctive features of the organic perspective



are firm organization, firm environment, and firm performance.¹¹

Firm organization. Firm organization includes the actual and potential internal means, mechanisms, institutions, developments, and forces that induce, enable, modify, and carry out the firm's strategy. These elements are not simply viewed as tools but also as part of an open system that has organic qualities such as emergence, informal relationships, and indeterminacy. Firm organization particularly includes the states and paths (i.e., history) of (a) resources (and technology), and (b) administrative and social structure. These two categories are viewed as mutually supporting and as distinct from strategy, whose main role is to mediate and guide firm-environment interactions. Each of the categories is viewed as an open subsystem that interacts with related elements in the environment through resource exchange, communication, and other relationships and boundary activities.

Resources (and technology)—we include under this general heading internal means and developments that can be drawn upon to accomplish the firm's goals, and especially those unique features called the firm's *distinctive competencies* (Selznick, 1957). We break down the general heading into the following: *resources*—the financial, physical, informational, and organizational resources, and the human resources such as experience, skills, motivation, and behaviors associated with individuals in the organization (Penrose, 1959; Barney, 1991); *relationships*—the formal and informal relationships, such as contracts, trust, loyalty, legal rights, and social capital that bind the firm with various actors and stakeholders; and *work flow technology*—the various activities and operations in which resources are employed, and the way work is done (Porter, 1985).

Administrative and social structure represents the ways in which means are administered and relationships are regulated among the firm's participants. These include the *organization's structure and processes*—the formal (e.g., governance

structure) and informal (e.g., culture, politics, control) mechanisms and organizing activities for allocating, coordinating, and mobilizing decision authority, resources, and rewards (Penrose, 1959; Chandler, 1962; Galbraith and Nathanson, 1978; Miles and Snow, 1978). In particular, we stress the processes, such as formulation, and emergence, by which strategies are created, realized, and managed, and the processes by which information is created, acquired, developed, maintained, organized, disseminated, transmitted, and communicated (e.g., Huber, 1991). Also included are the nature, attributes, connections, core values, beliefs, ideology, and behavior of strategic leaders and key decision-makers in the organization (Selznick, 1957; Porter, 1980; Collins and Porras, 1994).

These two categories of firm organization are consistent with and extend the view of the firm as a pool of resources embedded in an administrative framework (Penrose, 1959; Chandler, 1962). They reflect the respective emphases of behavioral and economic models, and include their common aspects, such as technology and information, as well as their distinctive—technological/economic vs. social—contributions. The categories chosen may have some conceptual overlap, yet they broadly represent the richness and complexity of organizations with their formal and informal (i.e., sociopolitical), human, technological, economic, informational, and relational aspects.

Firm environment(s). Although at times the physical environment can be an important consideration for the firm, it is useful to view the environment as consisting primarily of other actual and potential actors and their actions (Bain, 1956; Pfeffer and Salancik, 1978; Porter, 1980; Brandenburger and Nalebuff, 1996). Actors can represent different levels of analysis. They can include individuals, groups, organizations, or a set of individuals and organizations (i.e., ecology) such as a strategic group (Caves and Porter, 1977), an industry (Porter, 1980), a field (Scott, 1992), a distribution channel (Stern and El-Ansary, 1988), a network (Thorelli, 1986), an ecosystem (Moore, 1993), or a value net (Brandenburger and Nalebuff, 1996). The environment includes political, economic, social, institutional, informational, technological, and demographic aspects, conditions, and developments. The firm's environment particularly includes actors' resources, technologies, strategies,

¹¹ Firm strategy as defined before includes both planned and actual coordinated goals and actions (realized strategy). Consistent with most explanatory models and empirical research in the field, strategy is defined in the *OESP* model as a firm's *realized* strategy. In our subsequent discussion of the strategic management process, planned and realized strategies are treated separately.

relationships and interactions, and performances, and external developments, forces, events, and discontinuities that may affect them and the focal firm. Finally, environment includes past and current environments, and future environments in which the firm may potentially operate either as a result of its own initiatives or the result of the initiatives of other actors.

As with the other constructs, the environment is viewed both as a state and a path. This reflects, for example, the complementary notions of industry structure and industry evolution, the current composition of actors and their exit and entry patterns, the current postures of different actors, and the ways these postures have been formed. Additionally, the environment is viewed as influencing its own path. This view of environment includes dynamic features, integrates various behavioral and economic conceptions of its composition and character, and attends to multiple levels of analysis.

Firm performance. Firm performance indicates the quality of the firm's continuous co-alignment with the environment (Chakravarthy, 1986). This parameter can be represented by growth, profitability, survival, and other standard indicators, and by nonfinancial indicators. Depending on the context, firm performance may include indicators in multiple levels of analysis (e.g., business unit). Although it is often described in reference to a particular point in time (Dosi *et al.*, 1997), it also needs to capture development and change over time and reflect different time scales. Particularly, static efficiency can lead to maladjustment in the long run (Ghemawat and Ricart i Costa, 1993; Miller, 1990), and short-term misfit may be needed to attain long-term dynamic fit (Itami and Roehl, 1987). Therefore, firm performance may particularly need to attend to conflicting short-term and long-term alignments. It needs to reflect both the quality of the firm's exploitation of current resources and its capacity to generate new ones (Levitt and March, 1988; Sanchez and Heene, 1997).

Flow and relationships in the OESP model

In the *OESP* model, which is described in the upper part of Figure 1, firm organization, firm environment, firm strategy, and firm performance are causally related one to another. In the transition from prior work to the current model, constructs

such as goals and strategy have been consolidated into four broader, higher-level, logical counterparts (e.g., strategy), and their dynamic and unfolding nature has been highlighted. In addition, relationships between key constructs were consolidated into more coarse-grained linkages, and defined so as to emphasize temporal linkages and process themes and questions. Each of the constructs is also described by its state (e.g., initial conditions) and evolutionary path. It also influences itself over time: being influenced by its previous history, and influencing its future path and state (Monge, 1990). Furthermore, to provide compatibility of its parts and be consistent with underlying research programs, the model deliberately remains at a general level of abstraction. Yet, reciprocal influences also operate within each of the main constructs.¹²

Each construct in the model can affect each of the others in space and time, both directly and indirectly, through or jointly with other constructs, and can serve as a starting point for causal sequences. Constructs are not required to evolve at the same rate, and their reciprocal relationships do not imply equal magnitude or simultaneity of influence. This quality enables the understanding of parts of the model without necessarily studying all constructs at the same time. Particularly, the model can be used to examine specific dyadic relationships as well as more complex causal relationships such as positive and negative feedback loops (Arthur, 1995).

To simplify, Figure 1 describes the model as fully endogenous. Although the model is internally determined, history and environment can be defined in such a way as to make parts of them exogenous. Moreover, some interactions are assumed to be the result of random processes and chance events. Furthermore, the strength of the relationships between constructs, such as the relative influence of environment on performance, may vary in different settings.

¹² The model is not a theory in the usual sense but rather a frame to link lower-level models and theories. To keep it general, we deliberately avoided the use of more specific constructs such as sustained competitive advantage, industry, and capability (e.g., Teece *et al.*, 1997), or overly strong and restrictive assumptions and views (such as a fine-grained theory of the firm). Nor do we formally state specific propositions. The focus on higher-level constructs and relationships sacrifices some specificity but is necessary to accommodate diverse models, levels of strategy, and disciplinary orientations, and to fit more fine-grained constructs and relationships into one whole.

The model assigns particular importance to history in the way it defines constructs and relationships. History influences—but does not determine—current and *future* states of each of the variables. Systems are distinguished not only from events outside them but also from events occurring prior to them and subsequent to them (Fuller, 1982). Therefore, context is defined both in space and in time. The model also assumes that agents intend to choose and act rationally and that their actions are for the most part prospective and purposive. Yet it recognizes deviations from rational behavior such as those stemming from agents' cognitive limits, the means–ends uncertainty in the information environment (March and Simon, 1958), and other constraints on efficient adjustment (e.g., inertia). More generally the model extends the idea of rational planned action by opening the 'black box' to admit other cognitive, affective, social, and political influences.¹³

In the *OESP* model the interaction between the constructs can be designed, evolving, or random, but it is best captured by the notion of continuous co-alignment. As suggested by the definition of strategy as adaptive coordination, two facets of this process are particularly important. In its external interactions the firm, guided by its strategy, both responds to and shapes the state and path of its environment. Internal interactions arise as strategy is derived and enabled by organizational elements and in turn shapes their composition and development. Both external and internal interactions affect the firm's performance and in turn are influenced by it. Firm strategy both mediates between internal and external forces and in itself serves as a force that influences these other forces. It responds to changes and creates changes.

This co-alignment process can also be appreciated from the viewpoint of other actors. The firm co-aligns itself with the ecology of other co-adapting individuals and organizations (March, 1994). Other actors exchange resources with the focal firm, and interact with its strategy, organization, and performance. Because the focal firm places constraints upon other actors, they too may respond to and influence these constraints. Actual

firm performance is thus influenced by the quality of other actors' co-alignment efforts.

Implications and contributions of the OESP model

The *lower* part of Figure 1 summarizes the key contributions of the mechanistic and organic models on which the model is built and which it extends. At its most rudimentary level the *OESP* model includes and unifies the main constructs, relationships, and models of the mechanistic perspective. It still maintains some of the main mechanistic ideas that are central to traditional thinking in strategy, such as notions of steady states and strategy positions. For example, even if one rejects equilibrium as an empirical phenomenon these notions remain useful for theoretical and empirical research, and for simplified planning and communication (Ghemawat, 1991; Porter, 1991). The figure particularly shows the mechanistic perspective's broad agreement on key constructs, highlights its predominantly linear flow (from organization and environment to strategy and performance), the centrality of the strategy–performance link (appearing in all main mechanistic models), and the fragmented nature of its main models.

Organic ideas in turn extend familiar constructs and relationships through their emphasis on dynamic notions of constructs and relationships, reciprocal causation and interaction, and integration across and within constructs. Particularly emphasized are the processes and historical paths linking different constructs, self-loops, and causal relationships between several constructs and across time. Additionally, each of the different linkages in the model can be used to address variance and process questions. Therefore, the central questions of the field are viewed in the model as dealing with both *how* firm strategy and firm performance are determined and with *what* the determinants are.

The *OESP* model goes beyond merely renewing existing key mechanistic and integrating organic models and emphases. By isolating and applying key organic assumptions on time, flow and coupling, the *OESP* model offers several distinct contributions. *First*, it highlights several dyadic relationships that have been rather overlooked or only partially researched. For example, rather than the traditional focus on firm performance as the field's ultimate dependent variable, in the *OESP* model it is viewed as a means (independent variable)

¹³ Although we use such abstractions as firm, environment, strategy, coordination, action, and adaptation to describe macro structures and processes, we fully recognize that ultimately they include and are carried out by human beings and micro processes.

for achieving a constantly changing dependent variable— long-term performance. Furthermore, the model suggests that performance can affect each of the other constructs. It can affect firm organization, for example, by changing internal political processes or cause-effect beliefs. It can affect environment, as by changing resource distributions, signaling growth and profit potential, allowing comparison, and otherwise affecting actors' behavior (e.g., March and Sutton, 1997). Finally, it can affect strategy on a continuous basis, or through unique historical events such as a firm's near-death experience.

Another acknowledged but mostly overlooked relationship highlighted in the model is the effect of strategy on environment (and indirectly on performance). Hardly treated by any of the original mechanistic models, but highly complementary to them, this set of relationships has to some extent been examined by the new industrial organization research (e.g., Tirole, 1989). Although the environment is generally expected to exert a stronger influence on firms than in reverse, firms still have considerable and often overlooked latitude. In line with the organic concept of strategy, this latitude includes strategies that create new industries, establish technological standards, and otherwise generate 'creative destruction' (Schumpeter, 1942).

Additionally, the *OESP* model specifies the existence of direct casual flows between firm organization and environment (and their sub-constructs). These linkages represent the basic idea that firms and their attributes are parts of the environment, and are linked to it by exchanges of resources and information and by various relationships and institutions. For example, firm resources affect and are affected by competitors, customers, and local environment (Levinthal and Myatt, 1994; Porter, 1991), organization structure can affect competitors' behavior and industry structure (e.g., Caves, 1980), and perceptions of key individuals within the firm affect the environment viewed by the firm directly, or indirectly through organizational structure (March and Simon, 1958). These linkages are particularly relevant given the advent of relational views of competitive advantage and the greater recognition that key firm resources may reside in a firm's external network (e.g., Dyer and Singh, 1998).

A *second* distinctive feature of the *OESP* model is that it stresses the too often ignored

self-influences in each construct's development path. It specifically considers firm performance effects on its own development (Barnett and Hansen, 1996), such as when current customers help generate new customers (Arthur, 1995) and current successes lead to future failures (Miller, 1990). Additionally, it includes the effects of strategy upon itself such as when early choices constrain or enable future ones (e.g., Nelson and Winter, 1982; Bowman and Hurrey, 1993; Ghemawat, 1991).

A *third* distinct feature of the *OESP* model is in extending dyadic relationships to describe a *network* of potential relationships and multiple causal influences. One example of this feature of the model is the existence of multiple causal influences on firm performance. The notion of strategy is invoked to explain systematic differences in performance that are based on the firm coordinated (i.e., systemic) adaptive action. The effects of strategy on performance can be direct or indirect through changes in organization, such as changes in resource mix, and changes in environment, such as the reaction of competitors. At the same time firm performance can be affected by factors not necessarily mediated by strategy, such as superior resources, unfavorable environment, history, and unintended or uncoordinated actions outside of strategy (such as luck). Consequently, the model clearly separates between firm resources and firm strategy as two related but different forms of firm-specific effects on performance. Firm resources and structure may affect performance directly and not only through the specific positions and paths or as a result of managerial design.¹⁴

Another example of the network of relations exposed by the *OESP* model is the integration of organization (i.e., resources and administrative and social structure)—the traditional focus of the resource-based view—with the main constructs

¹⁴ Prior to the emergence of the strategy field, theories in industrial organization economics, such as the SCP, ascribed firm performance mainly to attributes of the environment. A common distinction made in this literature is between structural variables that can have independent effects on performance, and strategic variables. For example, in entry barriers, structural variables are resources such as scale of production, reputation, and know-how, and strategic variables are actions taken by incumbents such as entry-deterring strategies. Similarly, organization theory models, such as early contingency research, have viewed performance as being affected directly by organizational attributes such as organizational structure. These direct linkages between organization, or environment, and performance are relevant both to the strategy field and to the disciplines.

of the SCP model (E, S, and P in our model). Taken alone, the SCP mainly focuses on a single industry and therefore on business-level strategies. By contrast, the inclusion of organization in the model helps view firm-specific resources as not only alternative sources of business unit performance but also as potential means to affect the choice of potential environments. Consequently, by accommodating multiple product or geographic markets (i.e., environments) the model can also deal with *corporate-level* issues, such as location choices and global coordination.

A *fourth* and related feature of the *OESP* model is its accommodation of interactions. The model suggests that performance can be influenced by interactions between strategy, environment, and organization that are remote from performance in time and in the causal chain (e.g., Henderson and Mitchell, 1997). For example, the firm's current strategy may be a result of its past performance, which in turn was determined by past states and paths of the firm's organization and environment, which in turn co-determined each other in the past (e.g., Webb and Pettigrew, 1999). Alternatively, past strategy may have created a favorable environment that enables current strategies.

To further illustrate the applicability and distinctiveness of the *OESP* model, we chose Chandler's (1962) 'Strategy and Structure' study and some of the subsequent studies it inspired (e.g., Amburgey and Dacin, 1994). The original study is important, widely recognized and contains rich evidence. However, the main reason for its selection is that the dominant view expressed throughout the study, as well the common way in which it has been subsequently interpreted, are in the spirit of the mechanistic perspective. Highlighting the less familiar organic aspects of the study, contained in the original narrative and theoretical propositions and in subsequent studies, serves to provide different and complementary lenses. Supplementing Figure 1, the Appendix lists the main aspects of the mechanistic perspective stressed in the study and provides illustrations for each of the distinctive features of the *OESP* model. As the Appendix shows, the *OESP* provides a more dynamic, integrated, and interactive view than the one drawn from a mechanistic perspective. For example, it drives home the point that firm coordinated actions (e.g., structural adjustment) are not instantaneously and flawlessly achieved; they

trigger responses from other actors that affect the firm's performance and are themselves products of historical and contextual influences and trajectories. Moreover, to a large extent the realized strategies of Chandler's four focal firms were unique in their respective industries and potential sources of unique competitive capabilities. Nevertheless, there were different trajectories that led to a similar structural solution, and once in place imitation potentially eroded the benefits of distinctiveness. The *OESP* model's synthesis and extension of individual organic developments portrays a more complex and rich picture of strategy and its relationships with organization, environment and performance, and enables the generation of new relationships and insights.

The organic model of the strategic management process

The third and final pillar of the organic perspective is an organic model of strategic management. Based on our concept of strategy and the *OESP* model, the organic model revisits and extends the traditional design model.¹⁵ Strategic management is defined here as *the superordinate and continuous organizational process for maintaining and improving the firm's performance by managing, that is, enabling, formulating, and realizing, its strategies*. In this definition, strategic management is viewed as a process, a progression, which includes the sequence of events and activities over time (Pettigrew, 1992; Van de Ven and Poole, 1995). We view strategic management as consisting of a *one-time mode*—dealing with a particular strategy or a single strategic decision—and a *recurrent mode*—dealing with a continuous stream of strategies and decisions. It is inherently prescriptive: it deals with those aspects that can be shaped by managerial initiatives. Figure 2 provides a summary form of the elements and flow of the model. Figure 3 de-aggregates the organic model of strategic management and lists its distinct emphases.

¹⁵ Although we describe a general model, we recognize that different organizational, national, and industrial contexts may call for different kinds of strategic management processes and therefore may change the relative weight of some of the elements (e.g., planned vs. emergent strategy).

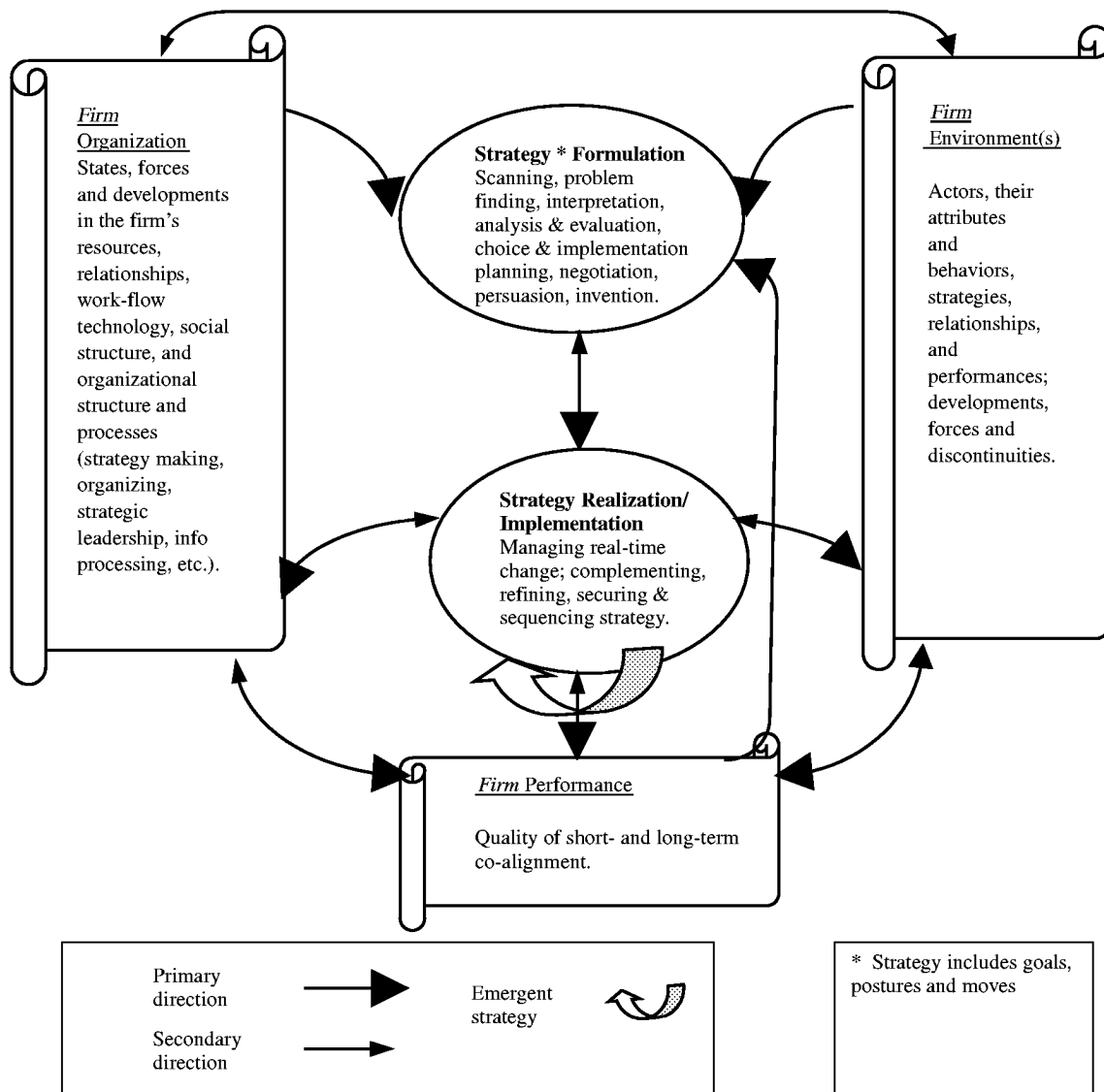


Figure 2. An organic model of the strategic management process: a summary form

Elements of the strategic management process

Strategy formulation. This subprocess is most closely associated with the traditional notion of strategy content and formulation (Andrews, 1971), and with coordination by plan (Thompson, 1967). It therefore includes the familiar elements of scanning, problem finding, analysis and evaluation, interpretation, and choice. Our model extends the traditional view in several ways. It specifically emphasizes the planning of alternative *strategic trajectories*, such as in new market entry (e.g., Bogner, Thomas, and McGee, 1996); it

suggests the need to evaluate the adequacy of *current* strategy as well as new alternatives; and it highlights the need to conduct *implementation planning* when such planning is deemed possible. Moreover, because of the 'wicked' nature of strategic issues (e.g., Mason and Mitroff, 1981), formulation includes not just analysis and synthesis but also invention, intuition, persuasion, and negotiation and does not necessarily follow a predetermined sequence of steps.

With the appropriate adjustments these main activities of strategy formulation need to be considered regardless of strategy level (a goal, a



discrete posture such as a generic strategy, a single move or a sequence of moves), and regardless of organizational level (e.g., corporate). Specifically, choice and implementation planning are viewed as natural complementary parts of the same integrated whole—the strategic plan or logic. This means, for example, that the selection of a ‘related’ diversification strategy (Rumelt, 1974) is incomplete if structural coordinating mechanisms, linkages between activities, sequencing of internal and external changes, and other steps needed to implement the selection, are not considered too. Similarly, multipoint competition has a potential performance effect only if it is complemented by the requisite cross-unit communication and integration.

Strategy realization/implementation. This sub-process deals with the realization of selected goals, postures and moves, and complementary choices (such as organizational structure). When it is guided by a plan (and hence viewed as implementation), it includes the execution of strategy, its refinement to lower-level steps, and the execution of organizational choices that extend the chosen strategy. The notion of realization particularly suggests that strategy may not be a result of deliberate planning but can also emerge (Mintzberg and Waters, 1985). Strategy realization/implementation also includes more traditional aspects of managing internal change such as communication and support building. However, it also includes the action–interaction sequences of managing the external context of strategic change, especially the realization of strategic trajectories and the absorption of strategy into the firm’s external context.

One-time and recurrent modes of the strategic management process

The strategic management process consists of an ongoing cycle of activities, which are reciprocal and in reality may temporally overlap and not be clearly demarcated.

As described in Figure 3 the *one-time* mode of the process, dealing with a specific strategy or decision, is adequately captured in the flow of the traditional design model. Added in the organic view are several emphases. First, the chosen strategy guides strategy execution, which affects performance directly, and indirectly,

through its effects on organizational (e.g., organizational structure) and environmental elements (e.g., industry structure). Second, an alternative and complementary path to strategy realization is an emergent strategy that can be interwoven with the formulation process or bypass it altogether. Emergent strategy can be based on other coordinating mechanisms such as core values, simple ‘rules’ and the like, and on the interaction between top management’s perspective and lower-level management’s feasibility assessment. Realized strategy takes its final form—a particular mix of coordinating measures—through real-time mutual adjustment to organizational and environmental forces and performance signals. Third, the flow cycles back in that performance influences organizational and environmental elements and realized strategy, and joins them as new informational inputs to strategy formulation. In the one-time mode of strategy, both performance and realized strategy shape future choices through learning and the provision of inputs stemming from emerging strategy or strategy experiments. In the cycle, thought and action continuously and reciprocally feed each other.¹⁶

The *recurrent* mode of strategic management reflects the idea that strategic management is not a *given* process but one that needs to be initiated, cultivated and occasionally modified, and is *ongoing*: its uses are not confined to a single cycle or a particular strategy. Three tasks of strategic management are particularly pertinent to its continuous nature. First, *facilitating the formulation of strategies*, for example, by establishing market and competitive intelligence devices or by managing the formulation process itself: staffing, hiring external consultants, dividing responsibilities between management and board, and establishing the desired degree of decision conflict. Second, *facilitating the emergence of strategies*, for example, by encouraging bottom-up contributions, cultivating supportive organizational culture, rewarding rich communication flows, and the like. Third, *enhancing the implementability*

¹⁶ Strategic leaders play an important but not unlimited role in the strategic management process. In contrast to their depiction in the mechanistic view as rational analyzers, we view their role as combining social and analytical facets and particularly as subject to constraints on rationality and adjustment. Moreover, leaders’ actions and behaviors, such as using external consultants to test the political feasibility of potential directions, or creating a sense of confidence through symbolic actions, often accompany or precede analysis.

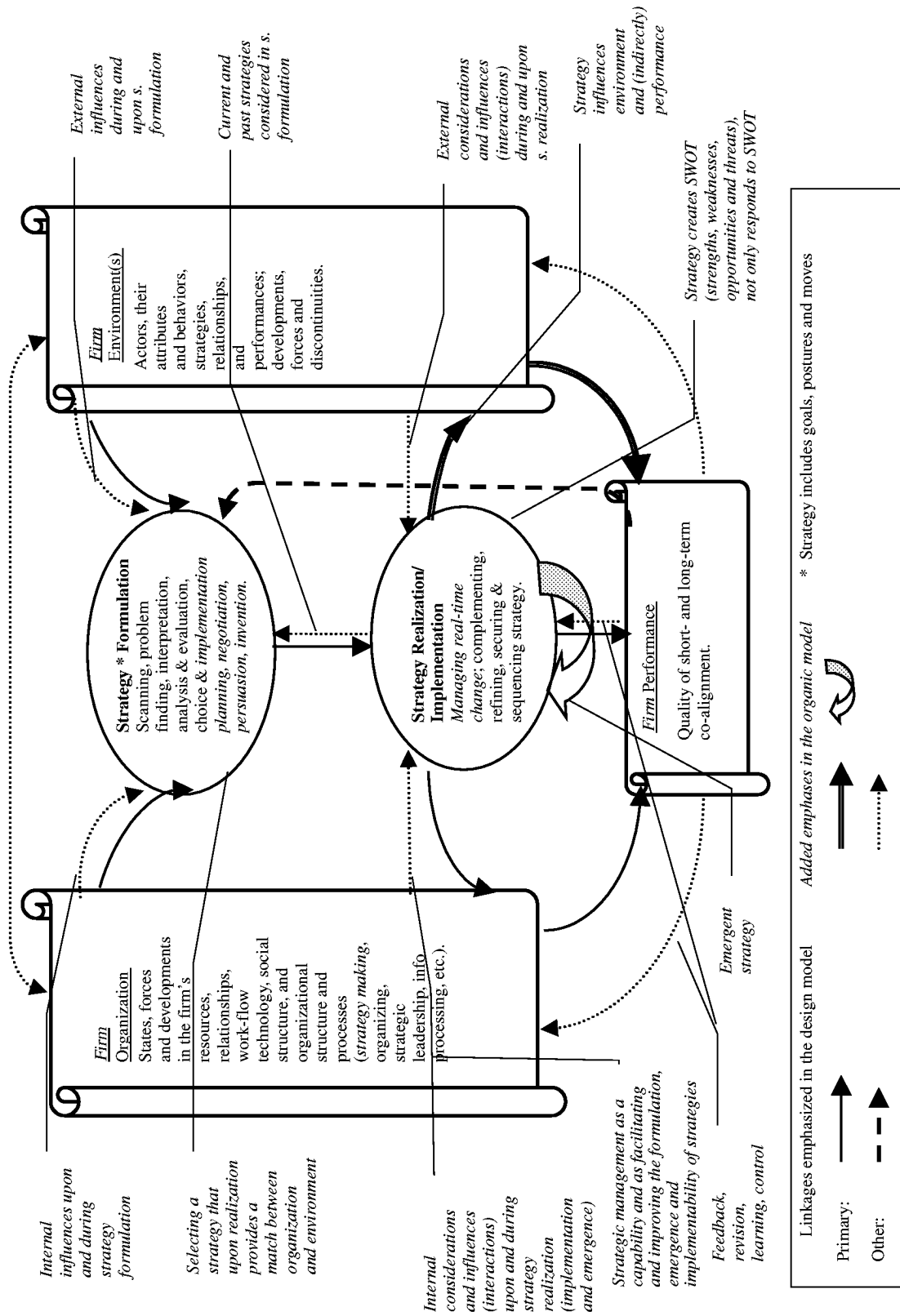


Figure 3. An organic model of the strategic management process: de-aggregated form and distinct emphases



of strategies, through delegating responsibilities, encouraging participation, and strengthening the firm's capacity for change, for example. These three tasks influence the first-order, more frequently repeated activities of formulation and realization. They can also be revisited under special circumstances. For example, the firm may need to take action through double-loop learning (Argyris and Schon, 1978) upon learning of consistent problems in a major aspect of its strategic management: the firm's response may be too slow due to a lengthy implementation process or it may not have the right mechanisms to encourage creative strategies.

Implications of the organic model of strategic management

Rooted in organic notions of time, interaction and integration, and as shown in Figure 3, the organic model of strategic management emphasizes several themes. We focus on four in particular.

First, a key feature of the model is that firm organization and firm environment interact with each of the subprocesses of strategic management. The roles of different elements of the firm's environment and firm organization are not confined to being *inputs* to strategy, but extend to being a *context* for facilitating strategy, interacting with the actual *process* of realization, and partly being *products* of strategy itself. Specifically, *external* action–interaction sequences are important in strategy realization at the same time that internal social, cognitive, cultural, and political processes play a role in strategy formulation. Furthermore, administrative issues and implementation may require formulation and planning too, and content issues need to include the choice of strategic moves and paths (see also Inkpen and Choudhury, 1995). Each of the strategic management subprocesses combines both social and analytic considerations. A more holistic view of strategy replaces the conventional distinction between content and process.

The integration of organization and environment into each of the subprocesses suggests a view of strategic management as a *process of managing change* (or persistence). It thus highlights human engagement, the particular role of strategic leaders, and the particular considerations associated with change such as lags, timing, duration, momentum, inertia, and abortive efforts. It

suggests that strategy formulation broadly deals with the sensing, evaluating, and planning of external and internal change rather than more narrowly with making choices. Strategy realization then deals with the realization of change, planned or emergent. Finally, the role of recurrent strategic management is to facilitate the emergence, planning, and realization of change, as well as to evaluate and integrate these facets of managing change.

Second, the idea that strategy affects its own inputs (i.e., organization and environment) may suggest that the process and effects of strategy realization need to be recognized at formulation: strategy needs to be planned with its effects in mind. Particularly, during strategy execution, additional changes may take place, and strategy itself may affect these changes in part. Since the firm's actions change the nature of the problem it faces, the firm needs to select a *realizable strategy*—one that will provide a good dynamic match between organizational and environmental attributes *if and when it is implemented and sustained*.

An example from a familiar context may illustrate this point. When the traditional choice model is applied, a firm considering entry into a new industry needs to evaluate the structure of that industry *vis-à-vis* the firm's available resources. We propose to consider how industry structure and firm resources might look *if and when entry occurs and is completed*: what changes will occur before and during formulation or execution (e.g., the simultaneous entry of other firms), what changes will be produced by the entry (e.g., migration of customers), what resources will be consumed during the process (e.g., managerial attention), what implementation capability the firm has (e.g., how efficient the entry process is likely to be), and how internal and external stakeholders might support or interfere with execution (e.g., reaction of incumbents, and employee support).

Moreover, the potentially path-dependent nature of strategy suggests that the evaluation of alternative strategies needs to consider their impact on subsequent strategies, for example, the ease of transition from one alternative to a fall-back alternative. Beyond the question of how current strengths, weaknesses, opportunities, and threats (SWOT) affect the choice of a current strategy, an equally important consideration might be the extent to which an executed strategy improves the

future SWOT of the firm. The view of strategy as creating and affecting its own inputs also suggests the need for backward and interactive reasoning, which is not an integral part of the SWOT model (Hill and Westbrook, 1997).¹⁷

A third implication of the organic model suggests that strategy formulation, the main focus of strategy research and teaching, may have a less significant role in the overall strategic management process and in affecting performance outcomes than traditionally conceived. This can be appreciated through the use of backward reasoning. As Figure 2 indicates, what may eventually affect a firm's performance is its realized strategy. Therefore, a main managerial question becomes how to generate the most effective *realized* strategies. This comes down to either implementing a previously formulated strategy, or realizing an emergent strategy. Furthermore, both planned (and subsequently implemented) and emergent strategies are supported by more basic and recurrent strategic management activities. Consequently, the firm may need to either plan well or create the organization necessary to implement effectively, or respond effectively, through emergent strategies. Thus, given the potential effects of implementation, emergent strategies, and strategic management's basic functions, the traditional attention given to choice and formulation may be disproportionate.

A final key implication is that strategic management when continuously practiced may develop to be a core firm *capability*. A firm may particularly excel at the strategic management of alliances, or become adept at more recurrent tasks: managing formulation and implementation in parallel, switching and resolving conflicts between different modes of strategy formation, and learning across cycles. Generalizing related suggestions (e.g., Hart and Banbury, 1994; Teece *et al.*, 1997), strategic management rather than one-time strategies may have more enduring effects on the firm's long-term performance.

¹⁷Familiar planning tools such as the industry life-cycle and scenario planning often imply the design of strategies around external givens. They do not usually consider changes in the environment produced by strategy itself. The need to choose the best strategy given the strategies of other players is implicit in the game-theoretic notion of the Nash equilibrium. This notion is extended here to include actions and responses of internal actors.

Summary of the organic perspective's epistemological underpinning and their manifestations

Like the mechanistic perspective it seeks to extend, the organic perspective offers a coherent view of core strategy issues. For example, the view of strategy as affecting the firm's environment is also reflected in the reciprocal causality between the main constructs in the *OESP* model, and in the role of strategy formulation and realization. The idea of continuity and path dependence is evident in the attention given to future strategies in the organic model of strategic management. Also, the unified view of constructs and relationships in the *OESP* model helps better link the different sub-processes of strategic management. This internal consistency is enabled by the shared epistemological assumptions on time, flow, and the coupling of constructs. It puts conceptual, theoretical, and prescriptive models of strategy on an equal epistemological footing and encourages their cross-fertilization. Panel B of Table 1 summarizes the content, influences, and context of the organic perspective on strategy. Taken together, the table's two panels demonstrate how each set of epistemological assumptions provides coherence within each of the perspectives, and how the differences in the sets often yield distinct views on the same core issues.

DISCUSSION

Summary and contributions

The key drive behind writing this paper was the growing awareness that mechanistic models and ideas are losing their potency, while organic ideas have not gone far enough to renew them or to provide an alternative and more current perspective. One potential remedy is the development of a different overriding perspective that will help renew and integrate existing ideas and stimulate new ones. To that end we focused first on uncovering *epistemological* assumptions that have been used throughout the field's evolution, and second on selectively using organic assumptions to develop an internally consistent *set* of concepts, explanatory and prescriptive models. This focus reflects our belief that it is through the reexamination of epistemological foundations that long-term progress in the field can be made: a fruitful way to

change entrenched views is to recognize the way we think.

Each pillar of the organic perspective, developed in this paper, offers a distinctive view on the field's main issues as well as new directions that can be explored. First, the organic *concept of strategy* stresses action, coordination, and adaptation. It suggests that prior notions of strategy such as position and a pattern may have much more in common than previously suggested. It particularly highlights the need to better understand the variety of coordinating mechanisms, the ways they combine or conflict in practice, and the contexts in which they are most effective. Second, the *OESP* model shows how different lower-level models stem from a more integrated and dynamic overview of the field's main constructs and relationships. The model can be extended by examining less researched linkages, using process models (e.g., dialectics) to explain such issues as advantage creation, attending to history, multiple causes and change, and dealing with specific concerns of strategy like positioning or scope decisions. Finally, the *organic model of strategic management* highlights the recurrent and integrated aspects of the process and suggests a more holistic view of strategy itself. It urges us to better understand how strategy emerges and is enabled, and how the external and internal aspects of managing change are actually integrated.

We see the paper's chief contribution in proposing an extension and alternative to the mechanistic perspective and one that potentially offers a more dynamic, integrative, and appropriate framework for the phenomena and questions of interest to the field. The focus on organic ideas as desirable for the field's development is meant to reduce the perceived asymmetry between their potential and actual use, and to suggest that relying solely on mechanistic ideas may lead into a blind alley. The *organic perspective* provides a coherent yet distinct view on the field's core concerns and a means to generate and exchange ideas, facilitate interdisciplinary work, and increase the compatibility between what we study, teach, and practice.

The organic perspective is consistent with prior advocates of integration (e.g., Barney and Zajac, 1994) and dynamics (Porter, 1991). Yet it also extends these works. It gives a more concrete meaning to the notion of dynamics by combining issues related to time, such as process and history, with those related to flow, such

as interaction and feedback. It further provides substance to the notion of integration by offering broadly defined constructs, establishing their interrelationships, and showing how diverse models can be unified. Moreover, it joins prior proposals to combine *both* dynamics and integration (e.g., Bourgeois, 1984; Bowman and Hurrey, 1993; MacIntosh, and MacLean, 1999). It particularly puts to use, updates, and elaborates the work of Bourgeois (1984), among the first to highlight the need for the field to move from mechanistic to organic views.¹⁸

Though they provide different perspectives on the same issues, there are many ways in which organic and mechanistic ideas complement each other. Particularly, the questions of how a particular firm succeeded or failed, and what were the contributing historical conditions and developments, go hand in hand with the question of whether its fortunes came about because of a brilliant strategy, superior resources, favorable environment, or pure luck. Moreover, rational analysis is incomplete if it fails to account for the social nature of reality. In turn, the use of analysis and logical baselines can inform attempts to influence or develop actual behavior of individuals and social systems.

The organic perspective also offers several implications for the development of *practice*. When employed as a way of thinking, it encourages managers to think and act in ways that are more allocentric, holistic, process-oriented, entrepreneurial, and creative. It sensitizes them to issues of timing, critical intervention points, interaction, and the recognition of temporal patterns and sequences. However, unless organic ideas are supplemented by the applicable analytic models, strategic analysis and management risk becoming exclusively an art. Although good

¹⁸ A similar progression to a more organic view can be found in models of human behavior. A major debate in the fields of psychology and organization behavior has focused on the relative primacy of personality and situational determinants in explaining individual behavior. Although neither position completely negates the other, internal views see people as being motivated by inner drives (Freud, 1964) or traits (Allport, 1961), while external models (e.g., Skinner, 1953) view human behavior as primarily caused by external stimuli. A third and more recent perspective explains human functioning in a more dynamic and integrated manner. In social cognition theory (e.g., Bandura, 1986), human behavior is explained in terms of a model of triadic reciprocity in which behavior, cognitive and other personal capabilities, and environmental events interactively influence each other.

beginnings have been made by options thinking, new analytic models that can help strategic managers better deal with uncertainty, rapid change, and turning points are badly needed. Traditional analytic tools can also be improved. For example, models of internal analysis should move beyond the analysis of resources and activities to include other organizational aspects, and to highlight the role of organization as a context, process, and product of strategy. Similarly, models that integrate sociological and economic aspects of the environment, or that move beyond traditional life-cycle conceptions of its evolution, are lacking. Moreover, although SWOT analysis is still useful, it can no longer serve as a primary model to guide strategic choice (Hill and Westbrook, 1997).

What general directions for a new *research* agenda for the field of strategy can be derived from the organic perspective? We divide these into conduct and substance implications while recognizing that some implications contain a little of both.

Conduct implications

Variable resolution

A better understanding of strategy-related phenomena is unlikely to be gained by attending to a single theoretical perspective, level of analysis, context, or time frame. Thus for example, the factors associated with the success of a single strategic decision, the tenure of a specific executive team, or firm survival across several generations of technological breakthroughs can vary widely (see Zaheer, Albert, and Zaheer, 1999, on the issue of time scale). Furthermore, what may be optimal at a collective level may not be optimal at the unit level. Progress is more likely to be made by using research with different degrees of resolution. By employing both fine-grained and coarse-grained approaches alternately, a more holistic appreciation of strategy issues can emerge.

Much progress has been made in the study of highly specific phenomena such as acquisitions and multipoint competition. Attention at the level of individuals and to micro phenomena can also make new and important advances. At the other end of the spectrum, strategy research can

benefit from using multiple time frames, comparative (historical) research, simultaneous exploration of different levels of analysis, and multiple theoretical lenses. Clearly, such a research agenda is more demanding and therefore it may be better approached in research programs, in large, book-length studies, and in periodical reviews rather than in the usual single-study format. However, it is likely to better place theoretical ideas and empirical observations in a broader and more temporal context.

History and process research

The organic perspective highlights the historical dimension of strategy-related phenomena. As illustrated in Chandler's (1962) research, the nature of historical perspective makes it more likely to be eclectic, integrative, and sensitive to time, interaction, context, and multiple levels of analysis. Case histories of firms and industries that were instrumental to the field's early development are sometimes labeled 'prescientific' (e.g., Rumelt *et al.*, 1994). However, a renewed interest in historical and clinical research is not a sign of regression but of the field's maturity. The benefits of such an approach are too great to be ignored by strategy researchers. New historical research is likely to be different from earlier work since it can now build on the cumulative progress made in the field. First, it can use both qualitative and dynamic statistical modeling. Second, it can use a better-developed theoretical base to frame the analyses. Third, it can be more sensitive to reading history forward as opposed to retrospectively, thus providing a better appreciation of how firms and managers cope with uncertainty, multiple trajectories, lags, and dead ends. Fourth, it can examine the development of firms, industries, and strategies before they become full-blown entities and thus add more knowledge on their early emergence, variation, and selection (see, for example, Aldrich, 1999). A revival of 'neo-historical' research in strategy may thus benefit from the path-dependent intellectual evolution of the field itself.

The content and spirit of the organic perspective require the use of longitudinal research and of less accepted methods such as sequence modeling, ethnography, and case histories. Cross-sectional studies can be useful but they cannot remain the predominant mode of analysis (Bowen and Wiersema, 1999). Process models look at different

issues than variance models and therefore potentially produce different observations. Although there are different opinions with regard to the need to integrate variance and process approaches (e.g., Langley, 1999), we certainly see the use of process models as appealing in several respects. First, by disaggregating time, they introduce unique possibilities for path and sequence to affect final outcomes. Second, process models may be better suited to gain insights into duration variables in general and into sustained performance in particular. Third, by their greater sensitivity to multiple trajectories, process models and studies are more likely to reveal sources of both success and failure.¹⁹

Interaction and managerial discretion

The interactive view of flow in the organic perspective has several implications. First, as suggested by others (e.g., Rindova and Fombrun, 1999) there is a need to go beyond stating the existence of mutual influences to specifying the exact mechanisms by which interaction occurs. Second, if we take seriously the idea that firms and environments influence each other, then it follows that some of the firm's resources and uniqueness is due to its embeddedness in a particular industry network, geography, and historical context. In turn, the firm's resources and actions may affect industry attributes, such as entry barriers. Moreover, both firms and industries are subject to emergent and selection processes that are less likely to be influenced by managers, if at all. The issue then becomes not so much whether the industry or the firm is a more important determinant of firm performance, but rather what discretion managers and other employees have in affecting the firm's internal or external context, and under what conditions.

Integration

We see *synthesis* and *dialectic* as particularly useful strategies to integrate different theoretical perspectives and research traditions (e.g., in the United States and Europe), or different facets of a phenomenon. In the case of synthesis this involves

the search for common ground that combines strengths and minimizes weaknesses, and in the case of dialectics the use of differences and tensions between competing perspectives to produce new understandings (Morgan, 1983: 377–382). One illustration that invites cross-fertilization is the theme of integrated management of change. Insights gained from behavioral models about how to initiate and institutionalize change can be synthesized with those coming from economic models, such as strategic interaction and options theory. Although they originate in different disciplines, these models deal with similar issues: managing uncertainty, overcoming resistance and inertia, coalition formation, and communication. As another illustration, models of learning and experimentation traditionally dealt with by behavioral analysts can examine, for instance, what the most effective experimentation strategies in different contexts may be (e.g., Mosakowski, 1997), and more generally become the focus of analytic approaches.

Language and communication

As pointed out by others (e.g., Weick, 1969), attention to process and interaction requires the use of dynamic vocabulary. Foundational work in the mechanistic perspective coming from both economics and organization theory has focused for too long on structural features of markets and organizations. The trend towards more dynamic analyses that came with the organic development may require a greater attention to the representation and communication of dynamic ideas. One approach is to use verbs, such as organizing and strategizing, to highlight micro actions and human processes and practices. Modeling particular aspects of time such as pace and duration may be another strategy (e.g., Monge, 1990). Finally, the use of visual vocabulary to convey process and interaction may also be beneficial. These different forms of presenting and communicating ideas can complement the use of organic epistemological assumptions on time, flow, and coupling.

Substance implications

Using the analogy of language, the organic perspective generally does not include specific sentences and a rigid syntax, but rather proposes a

¹⁹ For an excellent introduction to the conduct of process research and to pertinent foundational work on time in the social sciences see Pettigrew (1997).

shared base of key assumptions, concepts, relationships, and themes upon which a variety of stories can be told. What are some of the researchable questions consistent with the organic perspective that can be pursued with the stylistic and method themes discussed above?

Dynamic decision tasks

Strategic decisions are dynamic decision tasks. Taking time into account can be either in terms of considering the duration needed to make the decision, the optimal time to make a decision, or the changes in the decision structure over time (Arieli and Zakai, 2001). These aspects are relatively neglected in strategy research and in models of strategic choice and management. Particularly, the rational unitary actor model used in the mechanistic perspective is largely insensitive to the notion of time. The best-known model of organizational decision making that does take time and timing seriously into account, the 'garbage can' model (Cohen, March, and Olsen, 1972), is mainly a descriptive model of organizational anarchy. Is it possible to come up with other strategic decision-making models, descriptive or prescriptive, that will take into account continuous changes in resources, interests, competitive responses, and other factors, including those happening within the decision making period?

Dual classes of units of analysis and their interaction

An important distinction in process and evolutionary analysis is between bounded entities (individuals, work units, firms, groups) that strategically interact, and the units (such as routines, strategies, rules, institutions, transactions, competencies) carried by these entities (e.g., Baum and Singh, 1994; Aldrich, 1999). An advantage of making this distinction is that one can learn about the development processes of a unit from one class by examining how units from the other class develop. For example, as shown in the work of Nelson and Winter (1982), the evolution of routines can shed light on firm and industry evolution as well as be informed by this evolution. Other domains of inquiry, particularly relevant to the strategy field, may include the diffusion of strategies, the evolution of networks, and the relationships between institutions (e.g., norms, conventions) and rivalry (for other

examples see Moldoveanu, 2001). Although not simple to design, studies that look simultaneously at the two classes of units of analysis can shed light on how micro and macro processes interact and enhance cross-fertilization of disciplinary-based ideas.

Imperfect adaptation and inefficiency

Much of the empirical research on strategy is often criticized for being outcome based and confining itself to instances of success (e.g., Carroll, 1993). The focus of the organic perspective on process and path enables a better appreciation of imperfect adaptive processes and instances of inefficiency, mistakes, and failures. One remedy for the potential existence of a bias may involve sample selection. However, several more substantive questions remain to be addressed. For example, in what ways are the prerequisites and contributing processes for firm survival different from those contributing to sustained exceptional performance? What are the implications of the difference in the time frames involved in firms sustaining superior performance as opposed to experiencing decline and bankruptcy? In what ways, if at all, are the sources and development of strengths different from those of weaknesses?

The economics of firm's transitions

Another area of research that is consistent with our emphasis on process is the efficiency by which firms change their strategy, structure, products, technology, and the like. The mechanistic emphasis on static efficiency, evident in frameworks such as the value chain, have precluded a better understanding of how efficient firms are in their transitions. Issues such as how efficiently firms move from one position to another, and from one market to another, or how adept they are in implementing acquisitions, alliances or organizational changes, are not adequately captured by the notion of switching costs either. Among other concerns of the field, the analysis and measurement of the economics of transitions can improve the understanding of sources of firm success and failure, extend traditional static frameworks of comparative analysis of competitors and other interacting actors, improve the analysis of various decision alternatives, and strengthen the links between concerns of strategy formulation and realization.

Multiple and inconsistent goals

Most mechanistic models conveniently adopt the classic economic model of profit-maximizing firms. However, in reality and even when a long-term unitary strategy exists, managers often pursue several and at times inconsistent goals and objectives. In particular, tensions arise between profitability and growth and between short-term and long-term performance. What are the implications of using multiple and partly inconsistent performance criteria in both empirical research and strategic management models? How do we treat a firm's actions that may be appropriate for the short run and not the long run or conversely? These issues, and particularly the temporal tension between static and dynamic efficiency, are central to the practice of strategic management and should get a more central stage in strategy research and in strategic thinking.

These research directions are but a few of those that can build on the organic perspective. A sustained effort in each of them is likely to enhance progress on the field's core questions. Many aspects of the organic perspective are contained in earlier studies such as Chandler's (1962). Several recent studies too, such as Garud and Van de Ven's (1992) on internal corporate venturing, Levinthal and Myatt's (1994) on competencies and competition, Rindova and Fombrun's (1999) interactive model of competitive advantage, and Holbrook *et al.*'s (2000) on the evolution of firms' differences, nicely illustrate the perspective's content and spirit. If successful, these individual contributions and other new research can become an integral part of a more unified and better-attuned organic perspective on strategy research, teaching, and practice.

A FINAL WORD

Almost from its inception, the strategy field has to a great extent relied on a mechanistic perspective on strategy. This perspective, unified by an epistemologically coherent base, has gradually moved out of alignment with its context. The advent of organic developments, in turn, has brought better external alignment but not a unified approach. The proposed organic perspective relies on the three I's (incessant, interactive, and integrated) instead of the three D's (discrete, directional, and differentiated) and addresses the field's core issues

in unison. It therefore builds on the strengths of the two prior developments: it better harmonizes strategic models and constructs with one another, and with the new realities.

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APPENDIX: CHANDLER'S STRATEGY AND STRUCTURE STUDY REVISITED

(Based on Chandler (1962), Rumelt (1974), Williamson (1975), Armour and Teece (1979), Hall and Saias (1980), Amburgey and Dacin (1994) and Fligstein (1991))

Mechanistic Themes

The study connects the main constructs of interest to strategy research in the following (primarily linear) way. In each period the nature of the environment (E) and the resources of the organization (O), influence the strategy (S) chosen and this in turn determines the organization structure (O). Subsequently, the evolution of the environment and resources brings about a new strategy and a new structure (p. 15). As stated in Chandler's book (p. 314), strategy-structure (S-O) mismatch results in inefficiency (P). This proposition, as well as a direct strategy-performance link, were subsequently examined by others (e.g., Rumelt (1974)). Furthermore, firms in some industries were more likely to diversify than others (E-S) or adopt certain structures (E-O)(Williamson, 1975:141). Chandler also tends to view strategy as a plan and a posture/state and the strategic management process as a formal and analytical process directed by a dominant leader. These aspects of the process are illustrated in the case of Du Pont's diversification and structure decisions (p. 80) and in the organization study at GM.

Organic Themes and Distinctive Features of the OESP model

Illustration in Chandler's Work and Selected Subsequent Studies

<p>OESP: Organic Themes</p> <p>Views of strategy and strategy making: Strategy as interactive, dynamic, learned, integrative, inventive, and emergent. Strategy as adaptive coordination. Strategy making as social, intuitive, interpretive, and continuous. New linkages in SCP, SSP, RBV Organic developments (s.d.m, s. leadership, management of change, strategic interaction).</p>	<ul style="list-style-type: none"> ● In Standard Oil, structural adjustment and strategic expansion came in a more intuitive, unsystematic and ad hoc way. Change did not follow an explicitly defined plan (p. 172). Emergent strategy in Swift (p. 25). Du Pont's experiences with prior anti-competition strategies showed their limitations and led to a different strategic focus (p. 33). Evolutionary structural change. Endogenous growth creates unexpected consequences. ● Sears' revolutionary strategy in direct retailing (p. 233). ● Goals-Strategy-Structure coordination; strategy adaptation to changes in economic and institutional environment. ● Individuals (e.g., consultants) and strategic leaders play a central role in strategy formulation and realization (p. 283). ● Benchmarking and learning from other firms (p. 95). ● Executives' sense making of recent performance problems (p. 98). ● Conflict in decision making at Sears (p. 247). ● Multi-divisional structure facilitates strategy formation. ● Strategy grows out of structure and in turn leads to its modification (Hall and Saias, 1980). ● Strategy affected by those in power and their perceptions (Fligstein, 1991). ● Process of structural change—internal conflicts and politics, study committees, experimentation and revisions (p. 303). ● Competitive imitation and responses to structural change (p. 380). ● The essential reshaping of administrative structure nearly always had to wait for a change in top command (p. 381). Family held firms were slower to change both structure and strategy.
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(continued overleaf)



(Continued)

Illustration in Chandler's Work and Selected Subsequent Studies	
OESP: Distinctive Features	<ul style="list-style-type: none"> • Strategy includes both goals and actions (p. 13). Environment includes economic (i.e., industry) influences as well as social institutional ones (e.g., Fligstein, 1991). Structure includes culture, power and beliefs (Hall and Saisas, 1980). Performance includes short-run and long-run considerations. • Momentum in structural or strategy changes (Amburgey and Dacin, 1994); Performance as a self-generating force for growth (p. 383). • Historical context (e.g., 1920) provided opportunities for diversification (Fligstein, 1991). • History affects strategy through structure. • War experience in explosives affects diversification path at Du Pont. • The way in which its founders or their families make their terms with the administrative imperatives of a large-scale enterprise is crucial to the later history of a firm (p. 381). • Organizational anarchy and imperfect coordination: each functional department uses its own statistics (p. 101). • Functional structure impedes managers' strategic view and channels their attention (p. 247). • Biases in identifying capabilities at Du Pont (p. 112). • Sears' Wood strategy: general direction is correct but many mistakes happen on the way (p. 235). • Delays between introduction of strategy and adoption of structure (p. 135). • Indication of inertia in structural adoption at Du Pont (p. 101). • Process of growth is endogenous and emergent—exploiting resources as a dynamic force that changed both strategy and structure (p. 384). • Structure's influence on strategy is mediated by its influence on the strategic decision making process, and the roles, skills and perceptions of top management (Amburgey and Dacin, 1994). • Structural diffusion as a process (ch. 7). • Current level of diversification (S) and growth (P) affects strategy (S) and structure (O) changes (Amburgey and Dacin, 1994). • Family held firms slow to change strategies but also lack of strategic decisions let families govern longer (p. 381). • Equifinality: different routes to the innovation of multi-divisional form. • Structure at Jersey a result of historical evolution, personal preferences, legal requirements, and just happenstance (p. 165). • Structure and strategy are affected by legitimizing norms, imitation and fashion (Rumelt, 1974; Fligstein, 1991; Amburgey and Dacin, 1994) • As more firms adopted the structure, the link between structure adoption and performance disappeared (Armour and Teece, 1979) • Mutual learning between the focal four firms and other firms (p. 17). • Sears' entry to direct retailing revolutionizes the industry (p. 233).
Integrated Constructs	
Self-influences	
Path dependence and history	
Imperfect adaptation	
Process models (how questions)	
A network of relations, interactions, equifinality and multi-causality	
Strategy effects on environment	
Performance as independent variable	<ul style="list-style-type: none"> • Declining profitability at base industry pushes for diversification (Amburgey and Dacin, 1994). • Performance record of unrelated diversification has influenced subsequent choices of strategy (Fligstein, 1991). • Depression as an external shock influencing choices of strategy (Fligstein, 1991). • Basic reorganizations in Du Pont and GM came after major financial crisis.