

How Do Firms Change in the Face of Constraints to Change?
An Agenda for Research on Strategic Organization

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Strategic Organization as an Interdisciplinary Agenda within the Field of Strategy

The field of Strategy, which emerged as an independent discipline during the 1980s, addresses a broad range of issues about how individuals, organizational units, firms, and industries develop over time. Today, issues of strategic organization are commanding the attention of scholars from the fields of Strategy and related disciplines. The interdisciplinary agenda of strategic organization deals with such questions as how the organizational structures of firms influence corporate performance, and how companies restructure in response to changes in their environments. While this agenda falls within the range of issues in Strategy, it also deals with questions of central concern in Strategy's antecedent disciplines, especially sociology, organization theory, and economics.

The development of the field of Strategy and the related interdisciplinary field of Strategic Organization has yielded exciting new concepts and tools that specifically apply to assessing business organization and performance. These new tools allow us to deal with critical issues that cannot be dealt with adequately by other disciplines. At the same time, the application of new tools creates challenges that the field must overcome to be effective.

The interdisciplinary nature of issues in Strategy makes it difficult for the field to make progress. The research problems that we confront tend to evoke responses from colleagues with varying backgrounds. We meet each other with skepticism, and commonly criticize eclectic work for neglecting important concepts, hypotheses, and methods from the discipline we favor. As a result, researchers working on central issues often find it hard to convince many of our colleagues about our questions and results. Unfortunately, this dynamic sometimes compels scholars in our field – especially young scholars – to work on problems that are central to core disciplines and therefore less likely to become lightning rods for criticism from traditionalists. Unfortunately, the problems that are central in core disciplines are often peripheral to the leading issues in Strategy.

Of course, it is the interdisciplinary nature of the issues in Strategy that makes the field valuable. We study important questions that do not arise within the paradigms of other disciplines, examining issues that range from how organizational choices affect performance to why firms undertake particular ways of organizing. There is nothing (other than fear of the disciplines) that prevents us from investigating the conceptual

basis of the business organization as well as the principal challenges that confront practitioners, managers, and executives of all stripes. We can investigate whatever is important about how firms navigate toward particular ways of organizing and toward different levels of performance over time. Moreover, because we draw on the tools of multiple disciplines, we have access to diverse concepts and methods for analyzing important issues on their own terms.

We believe that this new journal, *Strategic Organization*, offers a wonderful opportunity to overcome these issues and to make progress in our field. *SO!*'s editors have stated that they seek submissions that meet the high standards of *any* group of scholars in our field, as long as the research deals with a central question in the field and answers it carefully. The editors have instructed the editorial board to compromise on whether *all* groups of scholars will be convinced, because they recognize that different people use different lenses with which to assess any given piece of research. But the editors also have instructed the editorial review board not to compromise on whether the issue is important. *SO!*'s editors and board members seek to publish research on central issues that is convincing to a thoughtful group of colleagues and that will help advance the broad agenda of strategy research.

Central Issues in Strategy that Relate to Organization

What are the major issues in our field? Several research questions strike us as central to current conceptual development, arising at levels of analysis that range from individuals to firms to industries to societies. How does industry structure condition the impact of firm characteristics on strategy, organization and performance? How does the nature of industry change influence firm behavior? What are the implications for social policy? At what point does international strategy converge with domestic strategy and, conversely, what distinct issues arise only when firms cross national borders? Under what conditions do attempts to increase corporate profits lead to socially sub-optimal outcomes? When if ever do firms subordinate their individual performance goals to those of a greater collective entity, which can be a dyadic partnership, a network of related firms, or a society? What is the difference between a firm and the aggregate attributes of a collection of people who work together? Under what conditions can individual contribution have a greater influence on performance outcomes than the social context? None of these questions fits neatly within an existing discipline. Clearly, there is extensive scope for strategy research to advance our understanding of key elements of business practice.

As an example of the potential for strategy research to provide distinct conceptual advances concerning strategy and organization, let us explore the research potential concerning a key question: How do firms change in the face of constraints to change, such as embedded routines and environmental rigidities? In particular: How do firms change *organizationally* in the face of constraints to change? These questions are relevant to scholars with different disciplinary orientations, including those who make prescriptive recommendations about corporate change and those who consider constraints

on firms' abilities to change. Indeed, important new research suggests that firms often have difficulty changing even when their survival is at stake.

The issue is not addressed in any comprehensive form by any of the underlying disciplines related to Strategy. In particular, questions arise about why and how some firms find ways to change despite substantial constraints. Indeed, evidence suggests that there is great variation across firms in their capability to change. Some firms can hardly effect even the simplest adaptation, while others reinvent themselves many times over the course of decades of business practice despite the presence of substantial barriers and risks. Scholars can address this issue with disciplinary lenses but a discipline-based orientation leaves important ground unexplored.

This issue is important for practitioners as well as scholars. Executives must evaluate which constraints to change are significant and identify the firm's options for dealing with change. They have to figure out what to do -- whether and how to drive change in organizational processes despite the obstacles, and whether the value of successful change would be worth the risks of failure. Operating managers and field workers also deal with this question. Sometimes they have excellent information about what is happening in their organizations' environments but lack skills to respond effectively. Sometimes they feel compelled toward change but have little knowledge about the purpose or objectives of change. Occasionally organizations are effective both at evoking appropriate change and at communicating effectively about its purpose, but performance results do not materialize as they expect. Executives then must deal with frustration throughout an organization about whether the change was appropriate.

In sum, there is no shortage of critical issues to study regarding how change occurs.

Furthermore, the issues do not fall neatly within the boundaries of the academic disciplines. There are economic questions: How can a firm balance the reward to change against the reward to staying in place? What kinds of incentives are appropriate for motivating change?

There are sociological issues: What kinds of teams operate most effectively under different conditions for change and for inertia? What kinds of social relationships between actors in the firm and in the environment tend to relax constraints and enhance change? What kinds of institutions tend to support effective responses to change in the face of constraints?

There are issues of organization design and organization theory: How can firms best expose themselves to information about opportunities for change, and about constraints on change? What kinds of routines and activities can be rattled by reorganization and survive effectively? Under what conditions can firms recombine elements of existing routines to create successful new routines?

There are issues of information technology and of technology strategy. How do firms' organizational choices influence their ability to recognize, adopt, and deploy new technology?

In short, the leading issues are interdisciplinary; they can only be answered by focusing multiple disciplinary lenses simultaneously on the phenomena. And the questions are critical to effective management practice. Moreover, progress in understanding the issues will create new concepts that become central to the field of strategy but may not become central to traditional disciplines.

Strategy under the Microscope: How Do Firms Change in the Face of Constraints to Change?

So what answer is the field of Strategy providing to the question: how do firms change in the face of constraints to change? A quick survey of strategy research and business headlines reveals a variety of answers and many more related questions. Indeed, we should confess that the field offers many purportedly conclusive answers, which at best complement each other but often are contradictory.

Consider, for example, research on a subsidiary question about how incumbent firms organize to innovate through major transitions in industry structure. Some researchers say that incumbent firms maximize their chances of surviving through an industry transition when they act in an integrated way to migrate activities to a new approach. Others suggest that new activities must be developed in separate divisions where they are protected from the political and organizational tension that can blunt creativity. Indeed, some researchers go as far as to indicate that any attempts to link the new divisions with the established organization will harm the new venture. Yet others argue that firms need to create distinct experimental units, while retaining high-level coordinating influence that will lead to eventual integration of successful experiments. And others argue simply that environmental selection pressures are so strong that firm level change simply cannot occur in such extremes.

These contradictory answers arise because researchers tend to focus principally on specific issues of organization design rather than on the interplay between the industry context, firms' skills, and firms' strategies. For example, some researchers have dealt with the question of how discontinuities in industry structure compel the creation of a separate division within an established firm (e.g., Christensen 1997). The choice to focus on a specific issue is sensible in many respects. It is very difficult to study a phenomenon at multiple levels of analysis, with nearly all elements of context allowed to vary. The demands of disciplinary rigor tend to favor hypothesis testing around specific causal relationships that can only be studied in controlled settings. Because the research is specific in its focus, the answers are contingent on important constraints to change (although the constraints often are not highlighted in short summaries of the research findings). By using the tools of specific disciplines, researchers generate important insights about how firms change in response to specific constraints. But without a broader agenda that breaks the rules of the traditional disciplines, researchers have

difficulty making progress on central questions about the interplay between different kinds of constraints and firm change.

Simplifying the Agenda

One way to make progress on a research agenda about the interplay between firm change and constraints is to break it into parts. Instead of dealing with the broad range of ways in which firms respond to constraints, it is worthwhile to study whether responses are path-independent or path-dependent. Path-dependent responses are changes that reflect the constraints that arise from a firm's own history. Path-independent changes are breakthroughs in which a company sheds old ways of doing things. This distinction allows researchers to define a crisp difference between two archetypes for change: one in which firms build on their existing activities and routines, and the other in which firms abandon old approaches in favor of new ones.

The critical insight here is that the method for breaking down the agenda does not impose structure on subsequent decisions about the relationships between constraints and firm responses; that is, the method does not assume that responses are always path-independent or path-dependent. Among many exemplars, Miller and Friesen (1980), Cohen and Levinthal (1989), Helfat (1994), Henderson and Cockburn (1994), Romanelli and Tushman (1994), Shaver (1998), Ahuja (2000), and Klepper and Simons (2000) provide wonderful examples of research that takes complementary approaches.

With this simplification, a range of relevant issues becomes clearer. Consider a set of five related factors.

First, we need to understand why firms are compelled to undertake path-dependent and path-independent changes. What can firms do to anticipate the kinds of change that they will face? When are changes so radical that they cannot be anticipated fully? To answer these questions, we can turn to traditional disciplinary research concerning technical change, industry economics and social forces. These perspectives help identify situations in which firms face strong incentives to undertake substantial changes. We can also turn to an interdisciplinary approach to understand when technical, industry, and social conditions are each important.

Second, we need to understand where to look in the external environment for important influences on attempts to change. When is the environment so fluid that the researcher must allow for change in nearly all elements of the broad context? When is the environment relatively stable, allowing the researcher to assume that only a few variables change simultaneously? When do competitive dynamics create rigidities and when do they create opportunities for change? How do social forces limit or compel change? To answer these questions, we can turn to industrial organization economics and sociology, which separately yield important answers about these questions, and which together provide even greater insight about the connection between economic and social forces in shaping context.

Third, we need to know more about the risks of path-dependent and path-independent change. Do firms almost always fail when they attempt changes that abandon old capabilities? Is path-dependent change almost always better? Does path-dependent change generally maximize short-run profitability but compromise long-term survival? To address these questions, we can turn to organizational theory, technology strategy, and industrial economics, but robust answers that compare the relative influence of organizational, technical and economic factors require methods from strategy research.

Fourth, we need to assess how firms sometimes broaden their activities to improve the portfolio of path-dependent responses at their disposal. By adopting activities that foster change of varying sorts, some companies may be more adaptable – that is, capable of path-dependent change even in the face of dramatic requirements. To address this issue, we can turn to organizational strategy research concerning change-oriented routines and to modes of change such as alliances and acquisitions.

Fifth, questions arise about how firms process information about requirements for change and constraints on change. Can firms anticipate challenges by adopting different kinds of activities *ex ante*? Is it possible to process information better in a time of crisis by anticipating the crisis conditions? To address these issues, we can turn to economic and organizational research that considers what types of activities create environmental scanning abilities, as well as to research on how prior activities shape the ability to undertake new activities.

With these insights in tow, it becomes much easier to break down and analyze questions about why firms sometimes react to discontinuous change in their industries by integrating the new response into their established structures, and why they sometimes react by creating separate divisions. The answers have to do with a broader set of factors that influence the risks, costs and benefits of the major alternatives: abandoning or building on established capabilities. The insights become even more nuanced as the researcher considers that some organizational responses allow the firm to abandon some capabilities while building on others.

It is worth noting that this kind of problem arises in research on other facets of the question about how firms change. Contradictory answers often arise because of limitations associated with disciplinary lenses. For another example, economists tend to emphasize the importance of product breadth and market share to firm survival, while sociologists emphasize legitimacy and niche dominance as critical indicators of survival probability. The result is that economists generally associate profitability with survival, while sociologists associate specialization and age with survival. Both perspectives, meanwhile, argue that size affects profitability, but with different causal logic (economics emphasizes the link between scale, share and profitability, while sociology stresses the link between size and social embeddedness). The arguments and answers are contradictory because the question at hand requires a broader point of view on the phenomenon than the disciplines independently favor.

What do We Know: Wild Cards

The field of Strategy holds great promise for dealing with questions about how firms change, and specifically about strategic organization. Forays along established research avenues – such as those we described in the last section – will get us part of the way to comparing and contrasting path-dependent and path-independent changes.

A thorough understanding of issues in Strategic Organization will require an interdisciplinary perspective that builds on concepts from Strategy and its antecedent disciplines. Already, a number of important ideas, which we call “wild cards,” carry the potential to serve as foundational concepts in the development of a more comprehensive theory on how firms change in response to constraints on change.

By “wild cards,” we mean concepts and ideas that do not neatly fit within an existing conceptual “suit” but, instead, offer the potential to create links among existing theories and, indeed, to create new theories. Although many of these wild cards partially rest within other disciplines, no discipline other than Strategy carries the potential to integrate their insights.

Here is a partial list of the “wild card” building blocks that are important parts of current research on strategic organization:

- Institutional influences on innovation
- Architectural and modular capabilities
- Rugged landscapes
- Models of industry/collective change
- Network effects
- Resources
- Dynamic capabilities
- Operating routines and routines to create routines
- Information flows
- Information architecture
- Mechanisms for transferring learning
- Organizational modes of change

By beginning to combine these seemingly independent wild card ideas, we can begin to form a pattern in the field’s progression toward a compelling answer to the principal questions about change.

First, work on institutional influences, architecture, rugged landscapes, models of industry/collective change, and network effects suggest that industry conditions are at least partly exogenous, and constrain change in ways that are at least partly outside the firm’s control. There is a landscape with peaks and valleys to which the firm must adapt. Earthquakes in the landscape may occur from time to time, and firms themselves may play roles in generating those seismic disturbances. But earthquakes in the landscape compel change from firms whether they anticipated the environmental shifts or not. Furthermore, change may occur across the landscape, with multiple firms facing similar

sorts of shocks at the same time. Through knowledge management and other activities that reflect mutual dependence, companies can improve their chances of survival.

Second, research on resources, dynamic capabilities, and routines indicates that firms can take on activities that make them better able to adapt subsequently, even to unanticipated kinds of change. Companies can take action that allows them to experiment with new approaches and to adapt more quickly when change is mandated. That is, firms sometimes can “learn to learn,” “unlearn,” and learn optimally in response to particular kinds of challenges.

Third, studies on information flows and architectures – which emphasize how organizational structure influences knowledge and learning – show that firms can enrich activities and design organizations to make them more adaptable to environmental changes. Through careful investment, companies can sometimes make tacit knowledge explicit, for example. This kind of investment can enhance a company’s ability to adapt even when the company has not expanded its range of activities a priori. In contrast, though, these investments also can make a company vulnerable to competition.

Fourth, studies of mechanisms for transferring learning and organizational modes of change are showing how firms can transfer knowledge across the boundaries of their existing organizational units, as well as to and from newly acquired units and alliance partners. By creating systems for managing across boundaries, firms can change the activities that take place within the boundaries and well as change the position of the boundaries themselves.

Making Progress

To make progress on questions such as how firms change in the face of constraints to change, we must continue to build research on the wild-card themes. It is these wild-card concepts that add depth and nuance to insights about when path-dependent and path-independent change can occur. By developing the wild cards and an integrative theory that connects these ideas, Strategy as a field will offer broad insights about the contingencies that shape how firms break through the tradeoffs associated with path dependency.

We must build on each other’s ideas. We must better understand how exogenous conditions, dynamic capabilities, and information flows influence the interplay between the mandate for change and constraints on change. We need to understand where constraints come from, why they bind, when firms break constraints, when firms work around constraints, and when firms fail to change. Disciplined research is needed to address each of these questions. We must convince ourselves of the validity of these wildcards and of the contingencies that influence when they are relevant before they can become building blocks of a synthetic theory about how change occurs.

A truly novel breakthrough for our field will occur after the building blocks for a theory of business dynamics are in place: once economists, sociologists, organization

theorists, information theorists, technology strategists, and other scholars begin to draw on the common language that Strategy research creates about central issues, such as how change occurs and about the kinds of constraints that impede change. It is at this point that the field will have the tools to deal with fundamental questions, including those that deal with how firms organization strategically to confront change in the face of constraints.

It will be a common language backed by robust conceptual and empirical tools that will provide the foundation for theory, frameworks, and empirical consistencies that advance a contingent view on how firms change despite constraints. The answers are likely to associate superior corporate performance with a firm's skill in achieving a balanced response to economic, sociological, and organizational imperatives. Already there is some progress on this front.¹ In turn, the answers will lead to the development of new conceptual insights in the discipline of strategy.

At a more general level, we believe that this example illustrates ways in which Strategy research can pursue important research questions that arise across and outside the bounds of existing disciplines. By developing wild-card concepts into an integrated and verifiable theory of strategy, the field can deliver unprecedented insight into business dynamics.

We anticipate that *SO!*, which has been conceived in the spirit of boundary-bursting research, will create a forum in which we can pursue the kind of studies we outline here – and we hope you will join the editors and editorial board in undertaking these explorations.

¹ See Miller and Friesen (1980) and Cohen and Levinthal (1989) as examples.

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