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STRATEGY AS A FIELD OF STUDY: WHY SEARCH FOR A NEW PARADIGM?

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The fundamental structural transitions in a wide variety of industries brought about by major catalysts such as deregulation, global competition, technological discontinuities, and changing customer expectations are imposing new strains on managers around the world. Old recipes do not work anymore. Managers, concerned with restoring competitiveness of their firms, are abandoning traditional approaches to strategy; they are searching for new approaches that give guidance in a turbulent environment. Many academics, confronted with the same reality, are reexamining the relevance of the concepts and tools of the strategy field. In the absence of a consistent and useful strategy paradigm that they can use, managers appear to have embraced attention to 'implementation' as their saviour, more or less abandoning strategy as either unimportant or uninteresting. Academics continue to search for new approaches. This special issue of the Strategic Management Journal presents creative and new thinking dealing with substantive issues and methodologies that can lead to the evolution of a new paradigm(s).

As we entered the 1990s, strategy as a field of study had fallen on hard times. Humbled by new global competitors, managers were consumed with TQM, reengineering, downsizing, teamwork and employee empowerment. Managerial preoccupation was with 'catching up' with the best of breed among their competitors. Issues of strategy seemed either remote, unimportant or uninteresting to many. The key words were 'implementation' and 'execution'. Strategy, some managers seemed to assume, was easy; implementation was the hard part. As a consequence, strategy staffs were dramatically reduced or eliminated. Consultants readjusted their wares to cope with the new client demands. Even well-known consulting firms, such as McKinsey and Boston Consulting Group (BCG), who built their reputations on strategy consulting, started to deemphasize their strategy focus and develop expertise in issues centered around implementation and efficiency of existing operations such as reeingeering and cycle time.[1]

Academic disillusionment with the value of strategy literature and schools of thought, while not as widespread, followed quickly. For example, Mintzberg (1994) challenged the planning process and by implication the process of strategy development. He questioned the validity and the usefulness of the various approaches to strategy analysis which has been the 'bread and butter' of strategy research and thinking for the last 25 years. Not only were the tools and processes of

Key words: Strategy paradigms, innovative strategy research, paradigm evolution

[1] See, for example, the focus of BCG on 'Time Based Competition'. Two senior consultants of BCG wrote the very popular book on the subject, George Stalk, Jr. and Thomas M. Hout, (1990). *Competing Against Time: How Time Based Competition is Reshaping Global Markets*, Free Press, New York.

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planning challenged, so too was the concept of a purposeful organization.

To casual observers, metaphors of strategy as learning and evolutionary adaptation suggested that successful firms were simply those that adapted quickly to the changing environmental demands. One was much more likely to hear senior managers call for quicker response time than for higher-quality strategic thinking. It was not obvious whether the debate was about the validity of current strategy literature and practice or whether it was about the need for strategic focus and behavior in management. At the extreme some critics of strategy seemed to forget that irrespective of how efficient the body (organization) got, it still needed a brain (strategic direction).[2]

Other scholars were similarly concerned about the direction of strategy research and practice. An early warning was sounded by Rumelt, Schendel, and Teece (1991, 1994). Following on from a 1990 conference, they raised four basic questions that are at the center of strategy practice and research: How do firms behave? Why are firms different? What is the function of, and the value added of the headquarters unit in a multibusiness firm? and What determines the success or failure of a firm in international competition? They invited scholars from non traditional backgrounds to make contributions. They were not only posing basic questions for consideration, but were seeking unconventional responses to them. Healthy self-criticism is a precondition for progress.

We believe this turmoil in the field, in research and in practice, is a reason for optimism. The state of strategy, during the 1990s, can aptly be described as 'the best of times and the worst of times' for strategy scholars. While much of the criticism of the field may be valid, critics often miss the point. We believe that the need for strategic thinking, during this turbulent decade, is greater than ever. Thoughtful members of the academic community are increasingly recognizing that the concepts and tools of analysis that formed the backbone of the strategy literature, during its period of major growth (1965–85), may need a basic reevaluation in order to pave the way for new ideas. It is this belief that drove us to undertake the task of editing a special issue of the *Strategic Management Journal* entitled *Stratgegy: Search for New Paradigms*. Needless to say that this is but a small beginning in the search for new paradigms.

In this introductory section we will outline the major catalysts that are driving the need for a revitalized approach to strategic thinking and strategy development. Many of the assumptions that were embedded in traditional strategy models may be incomplete and/or outdated as we approach the new competitive milieu. We will argue that the need for strategic thinking and behavior among managers has never been more urgent. This reality should force us to reexamine the traditional strategy paradigms. We follow this analysis with a brief outline of the papers included in this volume and our assessment of their contributions. We then return to our basic thesis: that more than ever, the strategy area represents a fertile field for innovative research during this decade and beyond.

CHANGING COMPETITIVE MILIEU

Implicit in the four basic questions posed by Rumelt *et al.* (1991, 1994) is a view of the competitive space within which firms operate. We believe that during the last 10 years (1984–94), competitive space has been dramatically altered. The changing fortunes of some of the largest and 'best-managed' firms of the 1970s and early 1980s, such as IBM, General Motors, Caterpillar, Xerox, Sears, and DEC, are attributable to the radical changes in their competitive landscape and the inability of managers to foresee these changes. The problem is not unique to U.S.-based firms. European (DAF, Philips, Benz, ICI) and Japanese (NEC, Fujitsu, Matsushita, Komatsu) firms face the same problem of refocusing their resources and responding to the new competitive realities. Why did this radical industry transformation, the contours of which were visible for some time, escape systematic and persistent attention from managers? It apparently escaped the attention of academics as well.

[2] See, for example, the report on the success of re-engineering efforts in U.S. and European firms, based on an extensive survey by CSX Index, a consulting firm specializing in re-engineering efforts. One of the key findings of the survey was that strategy is still critical to improvement of performance. CSX Index (1993). *State of Re-engineering Report*. Boston, MA.

The forces impacting on the nature of competitive space within industries were several. These forces were changing the sources of advantage of firms and the economics of industries in new and unpredictable ways. Some of these forces are shown in Figure 1.

Deregulation

Deregulation in the airline industry, followed by the telecommunications and financial services industries, has had a major impact in the U.S.A. and the U.K. The profitability of industries (e.g., airlines), the pattern of competition and market opportunities (e.g., telecommunications) have been influenced by deregulation. These industries in turn influence a host of other existing (e.g., retailing and logistics) and emerging (e.g., multimedia) industries. Deregulation and privatization of critical infrastructure industries, however, is not restricted to the U.S. market but is also emerging as a worldwide pattern—in Europe, in Japan, and in developing countries such as India. Erstwhile command economies are also going through these transitions.

Structural changes

While the telecommunications revolution is fueled by deregulation, the revolution in the computer industry is driven as much by structural changes brought about by technology and customer expectations. IBM and all IBM compatibles (e.g., Fujitsu, Hitachi, Bull) were vertically integrated. The new computer industry is very fragmented. Intel and Motorola dominate the component business. Compaq, IBM, and Apple are big on hardware. Microsoft dominates the operating system. Lotus and other application vendors specialize in clusters of applications. There is a wide variety of distribution channels—Dell computers, to Sears, to Value Added Resellers, to owned distribution channels. This structural change, from the vertically integrated, mainframe-oriented, centralized computing environment to a decentralized, fragmented structure driven by specialist firms changes the nature of competitive advantage enjoyed by traditional players such as IBM. The basis for competition and the economics of the industry are radically different. New competitors have emerged challenging the dominance of large established players. It is hard to believe that Compaq did not exist in 1980. In 1994, it is challenging IBM for world leadership in the PC and laptop market and beyond.

Excess capacity

Excess capacity invites radical restructuring of industries. Bulk and commodity chemical industry used to suffer periodic upheavals caused by excess capacity (Bower, 1986). Bower documented the complex interplay between public and private policy as the chemical industry tried to negotiate a restructuring of excess capacity worldwide involving governments of the U.S.A., Japan, and Europe. Involved negotiations determined

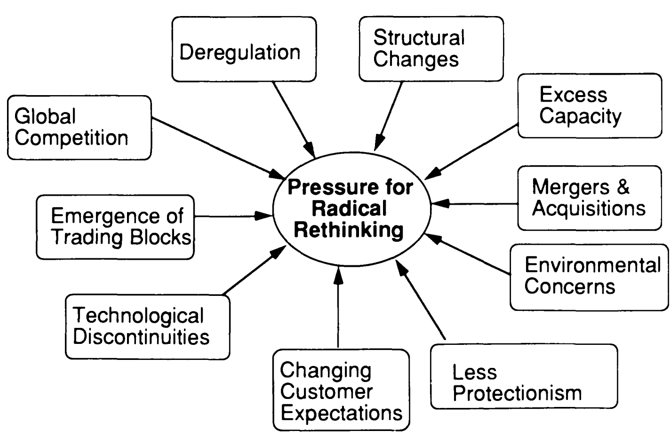

Figure 1. The inevitability of industry transformation

the time frames, cost–benefits, competitive consequences, and social impacts of such restructuring. During the last decade, a wide variety of industries—from consumer electronics to automobiles—were faced with excess capacity. While the industry is burdened with excess capacity, additional capacity is being added by newly developing countries such as China and India. The global restructuring of capacity is likely to emerge as a major issue during this decade.

Mergers and acquisitions

Mergers, acquisitions and alliances (MA&A) have been used as a method of coping with excess capacity (implicit rationalization) as well as a way of accessing closed and/or public sector markets. MA&A, around the world, have been a major force in telecommunications, financial services, power and other sectors. MA&A spawn a wide variety of strategic issues—from antitrust, to valuation, to cost, to technology integration and product line rationalization, to acquisition integration (Haspeslagh and Jemison, 1991).

Environmental concerns

The emerging concerns over the impact of industrialization on the environment have been significant. New forms of packaging, demands for recycling, notions of stewardship, responsibility for environmental safety and obligations for cleaning up are making new demands on all organizations. The idea of being environmentally friendly, or 'green,' will have an impact on all aspects of the business—from the conception of products and services to use and subsequent disposal by customers.

Less protectionism

Explicit restrictions to global trade are being dismantled. While countries and regions still protect industries, overt attempts at protectionism are becoming less tenable. Inefficiencies resulting from a protected past—telecommunication services, power, agriculture, insurance, construction, retailing—are being exposed. Firms from Japan, Germany, and France, as well as a wide range of quasi-planned economies, are suddenly feeling the pressure to get their services to meet world standards. The impact of 'free trade' can be daunting for some.

Changing customer expectations

During the last decade, the influence of changing customer expectations on business has been dramatic. From concern for quality and a constant demand for improved price–performance relationship, customers have influenced strategies of firms. Mass customization, the value attached to branded products, the growth of mail order purchasing and the consolidation of retailing, are but a few signs of the emergence of an aggressive and demanding customer.

Technological discontinuities

This aspect of change has been widely recognized. Dramatic changes in technology not only impact existing industries but spawn new industries as well. The evolution of the PC and the software industry, for example, is altering multiple industries—consumer electronics, education and entertainment, as well as office work. New product configurations are possible today: cellular phones, disposable cameras, distance learning and conferencing, personal printers and fax machines, and access to a wide variety of data bases. In combination with changing customer expectations, technological discontinuities will usher in new customer benefits at prices that would have been impossible to imagine.

Emergence of trading blocks

The evolution of regional trading blocks, the European Community, NAFTA and ASEAN change the basis and patterns of trade. Issues such as location of investments, creation of logistics networks around the world, and costs are influenced by these emerging relationships.

Global competition

Global competition has received academic and managerial attention (Porter, 1986). Global competition is pervasive. From semiconductors to cleaning services,[3] no industry is free from the

[3] Sumantra Ghoshal (1993). *ISS Corporation, Case Study*. INSEAD.

impacts of global competition. As is obvious in the case of cleaning services, even in local businesses, global competition is possible. The very distinction between 'domestic' and 'global' businesses is open to challenge. Globalization has changed the *boundaries of competition*. It has become easier to leverage a unique business idea without regard to national boundaries.

The brief outline of the issues described above, by no means exhaustive, lists factors that influence the strategy process, and ultimately, what is an effective strategy. Analyzing the impact of any one of these drivers would provide major opportunities for research. During this decade, to the researchers' delight (and often the nightmare of managers) almost all industries have been impacted by all or a subset of these factors simultaneously. The cumulative effect of these changes, still unfolding, is so significant that it can be best described as a 'silent industrial revolution.' The factors have led to a major shift in the basis for competition. For example, a combination of pervasiveness of information technology and changing consumer demands for improved price performance relationships (or better value) is leading to a process of *disintermediation*. New players can enter the market today with ease that was unknown even 10 years ago. Dell computers, for example, can side-step the existing distribution channels and go directly to consumers. Making reservations for airline tickets does not require a travel agent anymore. Home shopping is becoming more viable. ATMs have changed the banking scene dramatically. Distribution processes and costs have been basically altered in a wide variety of industries. Disintermediation impacts the value chain in an industry, reshapes the 'barriers to entry,' challenges the profit engine, and allows non-traditional and creative competitors to enter the fray quickly.

Yet another result of these catalyzing forces is the *disintegration* of industries—the breakdown of vertically integrated structures. This process has received some attention. The virtual corporation (Davidow and Malone, 1992) is a recognition that quasi-long-term relationships and a wide variety of agreements between firms can provide managers a viable alternative to the benefits that were traditionally ascribed to vertical integration. The choices today are not just make-or-buy, but a wide variation in between. As a result, transaction costs in industries are undergoing dramatic changes. But as industries disintegrate to evolve into new structures, simultaneously, *convergence or fusion* of distinct industries is taking place as well. The convergence of chemical and electronic imaging (e.g., photo CD), computers, communications and consumer electronics, traditional banking and financial services, entertainment and education is an unmistakable phenomenon. This convergence of technologies and businesses represents a breakdown of clearly demarcated boundaries. While traditional industry boundaries (e.g., photography, electronic imaging) are breaking down, there is as yet no clarity to the 'boundaries' of the new and emerging industries. These changes in the industrial landscape present us with a new set of issues. The obvious points of interest are as follows:

1. *Industry transformation is an object of interest.* The pace and the process of industry transformation are of great importance to managers as they allow them to realign their skills, resources, products and services, channels, and other elements of strategy to anticipate and benefit from the evolving industry structure. Managers are interested in how they can help an industry evolve in ways that are advantageous to them. Managing industry transformation is therefore an object of interest. Industry foresight, an ability to synthesize the collective impact of a complex set of economic, political, regulatory and social changes, is increasingly at a premium. Imagining (and anticipating) the future (viz., providing strategic direction) and developing a transition path towards it (viz., resource allocation, skill mix management and execution), in an industry undergoing complex transition is a crying need. *Industry structure, increasingly, must be seen as a variable to be managed by firms and not accepted as a given.*
2. *Changing the dominant logic of the firm is an object of interest.* All managers in successful firms and stable industries develop over time a dominant logic (Prahalad and Bettis, 1986). Rapid industry transformations, in new and unfamiliar directions, require that managers learn to change the dominant logic and the recipes that they have grown up with. What used to be the basis for a policy that enabled a firm to be successful may turn out to be

the orthodoxy that stifles the ability of that firm to decode and anticipate the nature of changes taking place and adapt. Rethinking managerial frames in large firms is an important issue for strategists.

3. *Rethinking the unit of analysis for competitiveness is an object of interest.* What should be the unit of analysis for assessing competitiveness? A product? A product line? A business unit? A cluster of business units within a firm, the diversified firm? A cluster of firms including suppliers, collaborators, home governments? Maybe all of them. Increasingly, the appropriate unit of analysis for understanding the pattern of competition and for developing appropriate responses is likely to depend on the industry and the firm in question.

We could add significantly to this list of issues. Readers can identify additional ones, based on their perceptions of the nature of collective impact of the drivers on the basis for competitive success. We believe that these emerging issues in strategy provide untold opportunities for new and innovative research. Practitioners are faced with a sense of urgency. Old recipes do not work. Scholars have an opportunity. It is in this context that we should examine the implicit assumptions on which strategy concepts were built during the period 1965–85, and determine their validity.

Some of the key assumptions in traditional strategy analysis can be outlined as follows:

1. *Strategy is about positioning a business in a given industry structure.* (Porter, 1980, 1985). This view of strategy dominates the academic, consulting and to a lesser extent managerial thinking. This view of strategy is predicated on industry structures that are stable and identifiable. The reality of business during the 1990s is that industry structures are far from stable and are undergoing major transitions.
2. *The focus of strategy tools and analysis is existing industries.* The preoccupation with structural analysis forces us to be concerned with existing and stable industries. Sometimes we focused attention on declining industries (Harrigan, 1980). Seldom did the broad sweep of academic attention focus on industries in transition, much less on emerging industries. How does one identify drivers of industry transition? How does one develop industry foresight? How does one bet on (and allocate resources to) evolving opportunities such as multimedia? Biotechnology-based businesses? Is the future unknowable or just different? Can firms compete to create a new industry? Or create standards that influence the direction of a new industry? (Hariharan, 1991). Can implicit competition take place before specific products and services are offered to the public? Important as these questions are, many of them have eluded significant academic attention.
3. *The primary focus of strategic analysis is the business unit.* Industry analysis, once again, forces us to focus on strategic analysis of individual businesses. Corporate strategy, as popularized by consulting firms such as McKinsey, BCG and others, was often seen as portfolio strategy (Hofer and Schendel, 1978). Only recently have scholars seen the corporation as more than a collection of business units. A corporation can be a bundle of resources and competencies (Wernerfelt, 1984; Dierickx and Cool, 1989; Teece, Pisano and Shuen, 1990; Barney, 1989; Prahalad and Hamel, 1990). Even this shift in emphasis does not suggest an approach to understanding inter-corporate competition. Does Sony compete with Philips? Does Canon compete with Kodak or Hewlett Packard? Does the scope of this competition extend beyond specific business units?

   Competition, in many industries, even extends beyond inter-corporate competition. Often clusters of firms compete. In the videorecorder industry, the VHS coalition led by JVC and Matsushita competed with the Sony-led coalition (betamax) for industry acceptance. The Intel led coalition is battling the Motorola-led coalition in microprocessors for PCs. Competition and, therefore, strategy must be understood at not just the business level, but at the level of corporations and at the level of coalitions or clusters of firms.
4. *Strategic outcomes can be explained on the basis of economic analysis.* Economic analysis is a critical component of strategic analysis. However, political and public policy analysis is as crucial as economic analysis. A significant literature exists in the international business

research stream on the impact of government policy—especially the role of host government policy (Doz, 1979). However, mainstream research on strategy has not accepted the complex interplay of public and private policy as determinants of strategy outcomes; or that economic and political analysis are equally important to the strategist.

5. *Strategy is the result of an analytical process execution of strategy is an organizational process*. This is a stylized view. Debates about content and process have plagued strategy research. In spite of evidence to the contrary (Bower, 1975; Burgelman, 1983) the impact of process on strategy and resource allocation is constantly underplayed. Involvement of all employees, energizing the organization, promoting creativity and innovation as engines of competitive vitality, is often underestimated. Quality of management is increasingly associated with sources of competitive advantage (Doz and Prahalad, 1988). Dissimilar performance, given similar resource endowments between firms, still needs a convincing explanation. In spite of this mounting evidence, scholars have either underemphasized the process and people issues in their pursuit of economic understanding of strategy, or the other way around. Seldom has there been a balance between the two. Neither can be ignored by strategists.

The underlying assumptions behind the strategy literature are several. Our goal here is not to develop an exhaustive survey of these assumptions. The idea is to identify a few examples of what we mean by 'implicit assumptions' in the literature. Then we can illustrate that the rapid industry transformation that we identified earlier should cause us to go back and reevaluate the concepts and tools carefully. This was the motivation for this special issue.

THE SPECIAL ISSUE

We started the special issue with two goals: to invite scholars to submit articles that described new issues, or phenomena of interest to strategists or new approaches to the analysis of the complexity of the evolving competitive milieu. The call for papers was an open invitation to engage in 'informed speculation,' to experiment, to go beyond the well-identified topics. We were overwhelmed by the response. We received over 150 submissions. The nature of the submissions and our goal are shown schematically in Figure 2.

Many of the submissions were extremely well executed but did not fit our criteria—exploring new territory. These were sent to the regular *SMJ* series for consideration. The University of Michigan hosted a conference where a small subset of authors whose submissions were on the shortlist were invited to present their papers. We invited scholars from nontraditional disciplines to critique these papers. The list of discussants for these initial papers is given below:

Professor Louis Gomez, Charles O. Hucker Professor of Buddhist Studies and Asian Cultures.
Professor John Campbell, Professor of Political Science and Chairman, Japanese Studies
Professor Ted Snyder, Director of the Davidson Institute for Transitional Economies
Professor Scott Masten, Associate Professor of Business Economics and Public Policy
Professor Robert Quinn, Professor of Organizational Behavior and Human Resource Management
Professor Jane Dutton, Associate Professor of Organizational Behavior
Professor Carl Simon, Professor of Mathematics, Economics and Public Policy
Professor Sam Hariharan, Assistant Professor of Corporate Strategy

The papers selected for this issue after exhaustive review, in our judgement, represent the most innovative of the submissions received. These nine papers push, even if gently, the frontier of strategy research and scholarship. We will briefly outline the issues described in each of them.

We have grouped the papers into four clusters.

Cluster one starts with two papers that outline a critical issue in strategy and develops an intellectual approach that is new in the strategy literature. Professor LaRue Hosmer's paper, 'Strategic Planning as if Ethics Mattered,' admonishes the field for not paying explicit attention to the issue of ethics. Surely, ethics has had a roller-coaster ride in the literature. As Hosmer points out, it was a critical element in the strategy and management literature during the 'good old days' of Barnard, Simon, and Andrews. It

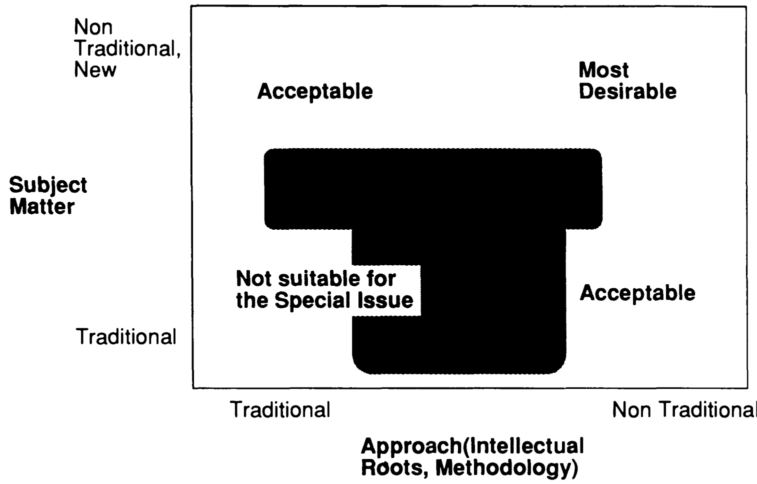

Figure 2. The framework we used and the nature of submissions

metamorphosed as social responsibility of the corporation. The works of Ackerman and others are illustrative of this version. It then languished for about 15 years. Hosmer not only forcefully argues for its full reinstatement, but goes on to provide a clear articulation of the principles of ethics, the intellectual roots of these principles, and implications for scholars and managers. By suggesting that ethical analysis of decisions become an integral part of management, Hosmer's paper provides a clear challenge.

Kiyohiko Ito and Elizabeth Rose in their paper, 'The Genealogical Structure of Japanese Firms: Parent–Subsidiary Relationships,' accomplish several interesting objectives. First, they provide a Japanese perspective, a contrast to the Western (and U.S.) model of a diversified firm. Further and even more interesting, they demonstrate the futility of trying to understand the strategy of a specific firm, without the context of the collection of firms within which it is nested. These relationships can be historical. Legal separateness, a measure of autonomy and independence, can coexist with strategic linkages and dependence. Diversified firms do spin out successful subsidiaries as an element of strategy—to give the subsidiaries strategic and operational freedom, as well as increase parent's market value and prestige. Divestment of subsidiaries need not be a signal of strategic failure. The notion of organizational mutations, in the context of diversified firms, is appealing as it allows them to be extremely flexible with respect to financing, strategy, use of core competencies, and alliances with other firms. Two issues are of interest: one is the use of genealogy as a tool of analysis of diversified firms; second, and more importantly, is the application of anthropological, sociological, as well as economic reasoning to understanding diversification. Do Japanese firms do this because they are Japanese (and it is an integral part of the 'parent–child' relationship, an anthropological examination), or is it because it allows them to leverage resources better–get better market capitalization (the equivalent of a quasi-breakup value of the firm) and growth (an economic analysis). Secondly, this paper identifies opportunities for comparative analysis of diversification patterns, the role of top management, and the logic for building the portfolio in these firms.

Cluster two focuses on the importance of 'invisible assets' in an organization. Knowledge, most would agree, is an asset. Learning as well as forgetting are critical elements of being a vibrant organization. However, very little systematic attention has been paid, in the strategy literature, to the structure of knowledge, types of knowledge, levels at which it is generated, accumulated, stored, and deployed as well as how it can be leveraged to enhance corporate performance.

We start with a paper by Georg von Krogh, Johan Roos, and Ken Slocum, 'An Essay on Corporate Epistemology.' There has been significant effort at understanding the learning process in organizations. However, there is very litle attempt to understand the structure of knowledge, how organizations 'know' and how knowledge structures develop. Borrowing from autopoiesis theory developed in the field of neurobiology, the authors build a case for incorporating the cognitive processes in the study of strategic management.

The essay written by Gunnar Hedlund, 'A Model of Knowledge Management and the N-Form Organization,' is an interesting companion piece. The essay focuses on knowledge management at four levels: individual, small group, the total organization, and the cluster of organizations of which a specific firm may be a part. Managing knowledge—its creation and use—a critical component in managing the 'invisible assets' of the firm, is emerging as an important role of top management. The author suggests a nonhierarchical, in effect a heterarchical structure (framework and a conception), for effective management of knowledge. The task of managers must be separated from the tools of management (or the levers of influence).

The third paper in this cluster, 'Linking Organizational Context and Managerial Action: The Dimensions of Quality of Management', by Sumantra Ghoshal and Christopher Bartlett, using a case, describes the process of creating the context that enables higher performance, better capability to create, share and use knowledge for action. The article focuses on the evolution of these tools and the process of creating the appropriate context, one brick at a time.

Cluster three consists of articles which build on an existing edifice, but provide nuances that are new. Thomas Murtha and Stefanie Ann Lenway discuss the interaction of public and private policy in their paper, 'Country Capabilities and the Strategic State: How National Political Institutions Affect Multinational Corporations' Strategies.' How do countries create capabilities and policy infrastructures that make them attractive to local as well as multinational firms? The thesis here is that rhetoric is not reality. More important, how do firms respond to these public policy initiatives—how do they decode both the intent and the practice of public policy initiatives and accommodate their strategies? During this decade, with the fall of communism, more than 3 billion people are living in transitional economies; economies which are moving from command and quasi-command economies to market economies. These societies are desperate to attract investments from overseas as well as support home-grown firms. This article provides a framework to think about the complex set of interactions that have to be managed for the hoped-for happy marriage of public policy and private enterprise.

The resource-based view of the firm is well developed and documented. Janice Black and Kimberly Boal in their paper, 'Strategic Resources: Traits, Configurations and Paths to Sustainable Competitive Advantage,' argue that we ought to move beyond describing traits and pay attention to the dynamics of how these resources are created and used. They suggest a conceptual model that focuses on the relationships between factor networks. The nature of these relationships, they argue, suggests which specific paths can lead to high levels of sustainable competitive advantage.

Constantinos Markides and Peter Williamson, in their paper, 'Related Diversification, Core Competencies, and Corporate Performance,' suggest that a competency view can shed new light on an old problem in the strategy literature: why do related diversifiers perform better? They suggest that the traditional explanations were based on a static view of relatedness in static terms. They point out that the real long-term benefit—the dynamic view—is about continually rebuilding and expanding the stock of strategic assets—competencies—such that they can continually create new and innovative sources of competitive advantage (as well as new business opportunities). The papers focus our attention on the two critical issues that confront a diversified firm: what is a resource and are all resources equally valuable? and what is relatedness and how does it help the corporation to diversify using core competencies? Both take a dynamic view of resources and argue that their value can be enhanced by the appropriate combination of factors—actions by managers.

Cluster four introduces us to a new methodology. By now, all of us are convinced that the strategy field, if nothing else, is characterized by complexity. But do we have the right tools to explore complexity? David Levy's paper, 'Chaos Theory and Strategy: Theory, Application, and Managerial Implications,' suggests that we ought to be exploring the use of a new methodology, one developed to explore the turbulent flow of fluids. The author provides a very succinct introduction to the theory. It is then applied, using simulation, to international logistics. While one might argue that problems such as logistics are easier to model and therefore susceptible to the application of this approach, it must be recognized that for the firm the results were of major importance. It identified the location of international sourcing platforms as well as the costs of traditional approaches to manufacturing and sourcing. It can lead to reduction of lead time as well as total delivered costs. We believe that the study of complexity is a major opportunity in the strategy field.

The papers included in this volume are but an indicator of the extraordinary nature of the opportunity for new research in strategy. Several new substantive issues emerged as worthy of scholarly attention, in various discussions during and after the conference. We provide a summary below:

1. *Emergence of micro-multinationals*. The study of multinational corporations has assumed that multinationals by definition have to be large firms ($500 million plus). The new reality is that very small (less than $10 million U.S. in sales), highly specialized firms with global scope have become a reality. Industries such as software, biotechnology, and professional services appear to be hospitable to such ventures. How do these firms acquire and service a global infrastructure? What are the costs associated with geographic spread? What are the benefits? Are size or uniqueness preconditions for multinationality?
2. *Protection of intellectual property*. Software, analytical routines, process controls, and knowledge of customers and suppliers—the accumulated intellectual property of the firm—is becoming, in a wide variety of industries, more valuable than physical assets. But the process of valuing, protecting, and trading these require new disciplines within most firms as well as the development of new legal and accounting approaches. How do you protect property 'that rides elevators and drives home every night?' Intellectual property issues focus on the intersection between law, human resource management, technology, and strategy—an under-researched interface.
3. *Premarket competition*. Most of the research on the dynamics of competition assumes that a market exists for products and services and the battle is for profits and market share. However, in many emerging industries, competition may start years before actual products and services are offered to customers. Competition for competence building, for standards, for core technology leadership can predate 'traditional market-based' (product-market) competition. The battle for HDTV standards around the world with the European, Japanese and the U.S. systems is a good example of premarket competition.
4. *Intercorporate and intercluster competition*. We believe that competition extends beyond business-level competition. Corporations compete for intellectual leadership (e.g., competition for multimedia leadership is pitching multiple business units and the corporation of diversified corporations such as AT&T, Philips, Microsoft, EDS and HP against each other). They compete for access to and control over competence and standards. While they compete, many of the same firms are also collaborators in consortia and in alliances of various forms. What is the logic of competition and collaboration? What are the costs? Disciplines needed to manage the complex relationships?
5. *Building competencies*. The nature of rapid industry transformations is creating a need for managers not only to recognize and manage existing competencies in a firm, but to rapidly acquire new ones. Sometimes, firms have to discard competencies to enable them to adapt to new realities. For example, how does a defense contractor acquire the competence to create and manage a consumer business? How do regulated, domestic providers of telecommunications services rapidly transform themselves into competitive, global players—the task confronting RBOCs, British Telecom, and AT&T?

The *analytical lens* that we need to creatively research the new strategy issues may also deserve a reexamination. We will suggest a few approaches for consideration of the reader. We make no attempt at justification. We hope that these will be self-evident.

The role of game theory in strategy development is being actively explored (Rumelt *et al.*, 1994). Many more theoretical lenses will be needed to explore the range of issues that the strategy field offers. For example, the study of complex phenomena using tools such as chaos theory, we believe, will increase. Theories of war and diplomacy provide good models for thinking about competition and collaboration (Kissinger, 1994). The concept of balance of power, implicit understanding of stability of trading patterns, signalling, providing credible threats, and forming preemptive alliances appear to emerge as important themes not only in statecraft but in the management of large global enterprises. Human cognition and nature of inference processes may be an attractive theoretical perspective from which to view a wide variety of strategy issues such as the ability of managers to rapidly change large firms. The limits to the legal framework in dealing with new intellectual property issues is becoming obvious. Nevertheless, legal issues and reasoning will become important. Legal issues will also dominate the deregulation process and the environmental concerns.

Recognizing that the strategy field needs a new paradigm is a critical first step. However, finding a paradigm that fits the emerging needs of the field, let alone one that can emerge as a dominant paradigm, is a tedious task. During the last decade the I/O paradigm seems to have held sway and emerged as the dominant paradigm in the literature, crowding out other approaches. There is a good explanation for the success of the I/O paradigm. It is parsimonious, is based on a well-developed and understood methodology, and has clearly identifiable theoretical roots. The emerging competitive landscape and the logic of success in the complex competitive environment, however, transcends the scope of the theoretical lens provided by I/O. This implicit recognition that the I/O paradigm may at best provide us partial answers is the driver forcing the field to search for new paradigm(s). Should the field rally behind I/O economics? game theory? sociology? or behavioral science? What is an appropriate theoretical lens to the study of strategy, appears to us as a premature question. Before we as scholars determine what lens to use, we should have a good understanding of the terrain.

Strategy as a field has an abundance of issues which can be studied from a multiplicity of theoretical vantage points. There is no need to limit variation in approaches at this time. This volume, we hope, is a small contribution to the search for a new paradigm(s).

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