

## Advances and Challenges in Strategic Management

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### ABSTRACT

The field of business policy/strategic management has offered a variety of frameworks and concepts during the last half century, many aimed at “taking business and its management seriously.” Research conferences and resulting books and journals have provided intellectual momentum, augmented by stimulation from challenges to “conventional wisdom” experienced in the global market. Almost two decades ago, a committee of faculty from several universities critically evaluated the state of doctoral education for strategic management (Summer et al., 1990). They made a number of suggestions to improve strategic management education and research, upon which this special issue of the *International Journal of Business* seeks to build.

The committee chaired by Charles Summer developed a series of recommendations for research on organizations as such. Among these were extended longitudinal studies of organizations, statistical analysis of organizational behavior and performance, and the refinement of organizational performance indices. Many of the authors cited here heeded the committee’s suggestions but found it necessary to expand on them due to evolving realities of “transitional economies,” advancing technologies, and environmental considerations. These factors have created new research and entrepreneurial challenges in the field of strategic management.

Scholars are confronted by issues such as government supported firms, social and economic effects of climate change, nanotechnology, internet-based piracy, shifting societal values and disruption of business by terrorism. Associated with changing problems of commerce is a need to develop more comprehensive and realistic measures of organizational performance. While some researchers have made progress in measuring risk-adjusted “real” returns to shareholders, others are focused on returns to a variety of stakeholders and are developing broader performance criteria. For example, some firms are progressing toward reducing their “ecological footprints,” and others have an aim of becoming “carbon neutral.” They are attempting to satisfy stakeholders who wish to minimize an “intergenerational conflict” if the current generation of adults were to leave their children a “greenhouse gas legacy” that would be very costly to remedy (Grant, 2006; Holdren, 2006; Stead and Stead, 2004).

As consequences of corporate activity for the broader society become increasingly understood, researchers are quantifying key constructs and analyzing them in ways which take us closer to valid measures of comprehensive strategic performance. This article provides information for those seeking to improve strategic performance while accounting for impacts upon multiple levels and sectors of society.

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## I. INTRODUCTION

As general managers seek guidance regarding the overall direction and operation of their organizations and as researchers seek organizing concepts for their work, various strategic management frameworks have become common bases for guiding work, particularly in market-based economies.

The global dynamics within which strategic management work takes place create great challenges for both researchers and practitioners. Major governmental restructurings in parts of the world during the last two decades have altered both constraints and stimuli impacting companies large and small. Technological advances have dramatically accelerated communications processes, but recent terrorist attacks have increased security concerns and slowed air transportation in many places. In addition, internet-based commerce supports buying and logistical operations over most of the globe.

Against the backdrop of such changes, the risk-taking behavior of many senior executives has led to substantial profits for some and dramatic losses for others. More than a few have been indicted by judicial authorities, and some have begun serving prison sentences.

Added to factors complicating understanding “corporate strategy” is recognition that there are many other “strategists” at work in society, some who seek to nurture and support corporate leaders and others who invest substantial resources to redirect or curtail corporate efforts. Whether the “non-corporate strategists” are near the seat of power in Beijing, at the head of an international technical standards organization, or are those leading a major non-governmental organization (NGO), these people often play important roles affecting the “strategic outcomes” of corporations.

As researchers seek to make further advances in strategic management, most also are cognizant of the fundamental paradox which lies at the intersection of the lives of researchers as opposed to practitioners. Many of the former seek multiple empirical observations with enough commonality that they can draw inferences regarding factors having effects on outcomes. The latter do nearly the opposite. They seek obvious or subtle forms of “uniqueness” that will lead to at least short-term monopolies in selected customer segments. Hence, the fewer critical variables that competitors (and researchers) can observe, the more competitive is the practitioner’s position.

In spite of the substantial obstacles faced in using many research methodologies, researchers have been making considerable progress. Before we summarize some of those advances, we should consider a bit further the context within which such work has been undertaken because it may be possible to appreciate the results of research efforts only when one remembers the global context in which the work was undertaken.

## II. GLOBAL CONTEXT FACING MANAGERS AND RESEARCHERS

History suggests there have been relatively few tranquil periods for general managers in market-based economies, but today challenges and combinations of challenges seem to be multiplying. Recent years have been demanding for those seeking to improve understanding of strategic management’s many facets.

As the 20<sup>th</sup> century drew to a close, many were trying to understand the consequences of the disintegration of the Soviet Union, at the same time that concerns

about the “Y2K” problems facing computer systems were beginning to loom large. Before that problem began to diminish, effects of the “dot com” boom and bust were spreading rapidly across many industries. As the excesses of that technological and economic transition were becoming ever more apparent in 2001, terrorist attacks on the World Trade Center and the Pentagon left many analysts scrambling for a new framework to aid understanding in a world that was both “hypercompetitive” and laden with physical threats from organizations with a variety of geographic and political origins (Barber, 1995 and 2001; Mitroff, 2004). By the time the ashes had settled in New York City, the world was gaining awareness of the economic momentum building in China and related damage to the physical environment in Asia (Fishman, 2005) and the atmosphere more generally (Flannery, 2005; Holdren, 2006; Ruddiman, 2005; Schelling, 2006; Stern, 2007).

Concurrently with the unfolding of many confusing and some strongly negative events, huge advances were being made in numerous fields. The human genome project held promise for major medical improvements, the internet brought huge amounts of information to remote locations at high speed and low cost, entrepreneurship was providing hope and prosperity to millions of new participants, renewable energy sources with improving economic and ecosystem characteristics were being developed in several parts of the globe, and nanotechnology promised great advances in fields as diverse as medical technology, energy generation and military apparatus (Christensen et al., 2004).

The globalization of markets has expanded substantially during the last decade as government policies have shifted in populous regions of Asia and Eastern Europe, and internet-based transactions have accelerated the speed and extended the reach of commercial activity. On one hand, some governments have moved toward market-based economies. At the same time, various governmental agencies have moved aggressively to intervene in markets (Ghemawat et al., 1998; Kennedy, 2002; Porter, 1990). A few “nation-state strategies” seem to be so successful, particularly in Asia, that some observers are wondering if basic tenets of international trade theory need to be revised (Bernstein, 2004). In contrast, numerous “failed states” have left their citizens without basic internal security, and their corporations have lost property rights and related contract enforcement abilities (T. Friedman, 2005; B. Friedman, 2005; Wolf, 2005). As a result, assumptions regarding the roles and capabilities of nation-states are being re-examined.

At the same time that many economic systems have been transformed, trends regarding biophysical ecosystem changes have become threatening to humans and to other species in many geographic regions. Improved technologies permit the more accurate measurement of “greenhouse” gases (GHGs), ocean temperatures, and particulate drift around the globe (Speth, 2004). Matters have reached the point that the Deputy Director of the Institute of Sociology of the Chinese Academy of Science has estimated that much of the nominal growth in their country’s economy in the last twenty years has come at the expense of the environment; i.e., their calculations suggest it is possible that between 30 and 100 percent of the nominal GDP growth in China’s economy has been offset by factors traditionally considered to be “externalities” (Kyngge, 2003; McGregor and Harvey, 2006). At the same time, researchers and executives must try to understand the differing analyses and conclusions of prominent organizations as diverse as the Copenhagen Consensus group, the Intergovernmental

Panel on Climate Change (IPCC), the United Nations Framework Convention on Climate Change (UNFCCC) and the joint science academies. For an example of the technical difficulties in the debates, see a critique of carbon sequestering and related challenges offered by Socolow (2005) and Holdren (2006).

Added to the above complexities is the recognition that substantial portions of the world's economic activity are not recorded in any formal data collection system. Some estimates place the proportion of "gray market" activity for the world as a whole at about fifty percent. Needless to say, anyone seeking to measure "strategic performance" in a country or industry haunted by such missing data would face substantial difficulties. Many major companies are trying to develop strategies for "bottom of the (socioeconomic) pyramid" communities, where basic data regarding income and many factor costs are largely missing (Prahalad, 2005; Hart, 2005).

Recent years have witnessed several examples of leadership risk-taking behaviors in large corporations that seemed designed more to take advantage of understaffed regulatory agencies than they were to develop dynamic technologies or evolving markets (Buffett, 2002). As one such wealthy executive/investor remarked in a small meeting when a potential investor asked if the former faced a conflict of interest in the substantial transaction under evaluation, he casually replied, "No conflict, no interest!"

Dual-career families and inherited wealth have led to changes in the career aspirations of many professionals. The combinations of part-time positions and alternating labor force participation have given rise to both new markets and mobility constraints. Hence, some traditional sources of motivation have shifted or faded for many high-potential individuals, particularly in post-industrial societies.

The selected factors contributing to the dynamic and ambiguous global context summarized above have created great opportunities for many, but in more than a few instances the investors, executives and government officials have been surprised by outcomes. Analysis by Watkins and Bazerman (2003), however, suggests that many such developments should have been predictable if either the researchers or practitioners had been using the best techniques available. Or, as a former Chairman of Eli Lilly Company recently wrote, the outcomes in many firms might have been different if senior executives had really been willing to "put the moose on the table" and openly address crucial issues on a timely basis (Tobias, 2003). We will now review some of the advances in strategic management available to those who are committed to "taking management seriously," so as to improve their organizations' several facets of strategic performance.

### III. STEPS IN THE DEVELOPMENT OF STRATEGIC MANAGEMENT

Different teachers and researchers will mark conceptual transitions within the strategic management field in somewhat differing ways and times, but a few of the key events are well documented. Various versions of the field's history can be found in Taylor and MacMillian (1973), Ansoff, et al. (1976), Schendel and Hofer (1979), Grant (1988), Summer et al. (1990) and Rumelt, Schendel and Teece (1994). Hence, a brief summary suffices.

Two broad streams of research were integrated by a number of participants during the decade following the mid-1950s. One stream might be described as

examining “people and organizations unconnected to economic performance,” and the other could be characterized as viewing “economic entities without human participants.” The “business policy” field has sought to provide integration between the two.

Ansoff's *Corporate Strategy* (1965) provided a set of analytical models of the sort one might expect from a person with training in mathematics and engineering and faculty experience at what now is Carnegie Mellon University. On the other hand, much of the prose offered by Andrews (Learned, et al., 1965) reflected his early training as an English major and the then current perspectives of his several colleagues at the Harvard Business School.

Formation of the Business Policy and Planning (BPP) Division within the Academy of Management provided a forum for researchers from across North America and later from around the world. Igor Ansoff, William Guth, William Newman, Dan Schendel and George Steiner contributed a diverse set of perspectives during the late 1960s and early 1970s. A conference at the Harvard Business School in 1971 brought together researchers and teachers from across North America and the UK to discuss both trends in teaching materials and frameworks for improved research (Taylor and MacMillan, 1973). A few years later a conference organized by Igor Ansoff led to publication of *From Strategic Planning to Strategic Management* (Ansoff et al., 1976).

In 1977, a research symposium at the University of Pittsburgh provided further impetus for converting much of the field's language from “business policy” and “strategic planning” to “strategic management” (Schendel and Hofer, 1979). Subsequently, Schendel, Channon and a group of colleagues worked to establish the Strategic Management Society (SMS) and *Strategic Management Journal* (SMJ). Annual conferences of the SMS and publications in SMJ and in the UK's *Long Range Planning* have been vehicles for presentations and articles through which the field of strategic management was able to develop sophistication and practical capabilities.

Research activities were again the focus of attention at a conference held near the University of Texas-Arlington in the mid-1980s (Grant, 1988). This conference consisted of a combination of invited and competitive papers that created a forum for lively dialogue about the future of various streams of research which were emerging in the field. Both the growing importance of political variables in the strategic process (Bower, 1988) and the increasing methodological challenges (Mitroff, 1988; Camerer and Fahey, 1988) were apparent to those in attendance.

By the late 1980s, the BPP Division of the Academy of Management decided that an analysis of doctoral programs in strategic management was necessary in order to determine “best practices” and to recommend steps to improve such programs in the future. The resulting report contained a number of recommendations regarding future research efforts and supporting administrative systems (Summer et al., 1990). The committee's deliberations, which resulted in the 1990 publication, underscored the importance of careful quantitative analysis of data having as much validity and reliability as reasonably could be achieved. However, the committee limited its recommendations regarding “performance measures” to those pertaining to profitability, market share, shareholder value, etc., and did not address the emerging issues regarding the measurement of “externalities” that would increasingly become the targets of stakeholders concerned with “greenhouse gases,” corporate ethics, interactions with those “at the bottom of the [economic] pyramid,” etc.

A few years later another conference was convened by Rumelt, Schendel and Teece in the vineyards of California to discuss various “fundamental issues in strategy” (1994). Additional and sometimes more specialized conferences have been sponsored by the Strategic Management Society in various parts of the world during recent years as means of encouraging the development, exchange and testing of new ideas in strategic management. With this sequence of symposia and research publications as backdrop, let us now turn to a few of the many advances which have been made during the field’s short history.

#### IV. ADVANCES IN THE STRATEGIC MANAGEMENT LITERATURE

With hundreds of scholars contributing a vast number of articles and research reports during recent years, there have been many more advances in the strategic management literature than space permits us to review here. Developments in the subfields of industrial dynamics, managerial decision making, marketplace globalization, management of technology, stakeholder expectations and organizational structure are described. Industrial dynamics has been the focus of substantial attention by numerous researchers for several decades (Ketchen et al., 2004). Beginning before the formation of the Business Policy and Planning Division of the Academy of Management, the importance of systematic industry analysis was being recognized as important to effective corporate strategy. At least as early as 1968, Harvard Business School faculty were analyzing the competitive pressures facing organizations like the Crown, Cork & Seal Company, not only in terms of their direct rivals from steel container manufacturers like American Can Company and Continental Can Company but also in terms of substitutes from glass bottles and forward integration by ALCOA, Reynolds or other aluminum producers. Backward integration from major beverage and food processing customers also was viewed as a continuous threat (Scott and Thain, 1973). CC&S’s deteriorating economic position was remedied after a major investor assumed the leadership position and proposed new concepts of market segmentation, minimum efficient scale facilities, delivery speed and other strategy elements leading to a significant improvement in performance. Such models for understanding competitive environments were extended in Porter’s *Harvard Business Review* article (1979) and his related book, *Competitive Strategy* (1980). (Some of the effects of Porter’s concepts are analyzed by Armstrong and Green, 2007, later in this special issue of the *International Journal of Business*.)

The “industry analysis” stream of research also witnessed development under the category of “strategic groups” (Hunt, 1972; Hatten et al., 1978). Several research methods have been used by various scholars to further our understanding of factors which contribute to improved performance both within and across strategic groups (Ketchen et al., 2004; McNamara et al., 2003).

Real options have been examined in terms of their potential contributions to investment in innovations or explorations and risk management. However, there are limitations to this framework arising from underlying assumptions and common organizational processes. Hence, determining the contingent conditions under which real options provide good guides to strategic action is important to the advancement of this research stream (Adner and Levinthal, 2004).

Armstrong and Green (2007) contrast performance of firms whose executives emphasized “competitor-oriented” objectives versus performance of firms where focus was more on “profitability,” showing higher profitability for those focused on this accounting criterion. Although relationships between market share and business profitability have been analyzed from a variety of conceptual perspectives (Kohli et al., 1990), there is considerable evidence that many companies have pursued market share objectives without understanding the numerous contingencies which lie between market share, profitability and stock price.

Another criticism of the role of economics in strategic management research has emerged in the literature. At issue are questions whether “economic concepts have become self-fulfilling prophecies” (Ferraro et al., 2005) and whether recent research has served to constrain concepts to directly relevant applications (Bazerman, 2005), perhaps as shown in the acceptance of tautology noted by Solow (1958).

Our understanding of the decision-making behavior of strategists has been aided in recent years by research in behavioral economics. As reported a decade ago, managerial biases described as “isolation errors” have a tendency to lead to future scenarios which are overly optimistic, whereas the risks assigned to individual projects are frequently overly pessimistic (Kahneman and Lovallo, 1994). Following the award of a Nobel Prize in 2002 for some of this work, it began to appear before broader audiences (Lovallo and Kahneman, 2003). Undoubtedly, there will be much more to learn as, on one hand, the internet makes rapid decisions regarding complex situations possible, and, on the other hand, both computer viruses and hackers create situations of uncertain reliability. As more detailed documentation becomes available regarding many major decisions during the “internet boom” at the turn of the century, we may be able to gain further insight into well-intended decisions with results that appear very different with the benefits of hindsight. (Unfortunately for researchers, there are so many lawsuits pending that arose from decisions which may not have been well-intended that much of the relevant data is apt to remain confidential until this era of litigation has largely ended.)

The development of cases with strong analytical frameworks can greatly aid our efforts to “take business seriously” (Franke et al., 2007). By using inflation-adjusted data covering an extended period of time, many of the misleading inferences developed by casual observers from nominal data covering short intervals of time at General Electric can be set aside. This methodology is highly consistent with the general recommendations from the BPP Committee’s earlier report (Summer et al., 1990).

The effects of leadership on organizational strategy are critiqued below by Bass (2007). He notes the variety of leadership characteristics which have been associated with successful leaders in both research studies and practitioner settings. Related research by Hambrick and Cannella (2004) studied the effects of adding a COO to the leadership function. More recently Hambrick and colleagues (2005) have made additional contributions by analyzing the job demands placed on executives in different contexts. Simsek and colleagues (2005) broadened the leadership role somewhat further to include the entire top management teams (TMTs). Lorange’s (2004) analysis of the CEO’s roles includes the nature of the interaction with the Board of Directors and the general responsibilities for governance of the organization.

Organizational learning has been studied extensively by several researchers, as noted by Gnyawali and Grant (1997) as well as Thomas et al. (2001). However, the

challenges for both CEOs and systems designers in the implementation of effective organizational learning systems have been great, as indicated in the research pursued by Amatucci and Grant (1993) and Baumard and Starbuck (2005).

Closely related to leadership and learning issues are matters of corporate governance, which have been studied from different perspectives, including that of CEO succession patterns (Zhang and Rajagopalan, 2004). The effects of “relay succession” or the passing of the CEO title to an internal heir apparent was found to be more successful than alternative selection methods under particular conditions. A key issue for many members of boards of directors responsible for choosing new leadership has had to do with the role of globalization in the future of the company and the type of executive needed in order to meet such demands effectively. Morgenson (2005) and Franke (1997) suggest that corporate and national performance may benefit from “shareholder democracy” and “industrial democracy”--the latter involving the wider set of stakeholders required by law in nations of the European Union.

In addition to studying effects of industries and leaders on strategic performance, researchers have recognized that globalization has become an increasingly important force as borders have opened, communications costs have declined, and collaborations among loose collections of firms and individuals has been greatly facilitated (Doz et al., 2001). On the other hand, some researchers realize that much of the cost of global production, transportation and sales have continued to be treated as an externality, and thus are not reflected fully in product costs or prices (Lovins, 2004). While scholars wonder how to accurately measure the results of such operations, Kono and Clegg (2001) have noted that many managers wonder how long it will be before they will be asked or required to incorporate “clean up costs” in their financial statements. Perhaps the reporting increasingly required of fossil fuel based electric power generating plants will become more broadly applicable. In the meantime, several major participants in the banking industry are broadening their application of the “Equator Principles” governing the ecosystem consequences of their major loans (Deutsch, 2006).

As part of the effort to incorporate globalization issues into the study of strategic management, there arises the almost inevitable debate about which are the better paradigms and tools for the work (Shenkar, 2004). For example, how crucial are investment levels or cultural differences in various sectors of the economy, and when is geographic location a crucial variable? Franke et al. (1991) examined cultural and convergence effects on economic growth in eighteen developed and less developed countries over two time periods. Snodgrass and Grant (1986) studied effects of cultural characteristics on planning and control systems across three substantially different countries. Which cultures may have converging characteristics as a result of educational systems and global communications, and which are being deliberately isolated as a means of sustaining cultural arbitrage through tourism? Browne’s research (2004) among different cultures in the Caribbean suggests that those pursuing autonomy and status in parts of those economies reflect differences in both cultural origin and gender. As researchers have tried to separate the factors which yield superior performance in multi-unit firms, one factor that seems to have been under-studied is the effect of countries in which operations occur, as opposed to industries or form of firm affiliation. Recent research by Makino (2004) illustrates that such “country effects” can be quite strong, particularly when businesses are operating in less developed economies.



Many of the rapid developments during recent years, particularly in China and India, have given rise to research activities and questions with far-reaching implications. The speed with which both manufacturing and service sector activities have been growing in Asia has stimulated many to wonder whether their fundamental assumptions about value-added chains, rates of technical and market change, expectations of governments, etc., are rooted firmly or instead rest on shifting sands (Scott and Matthews, 2002). The roles of investment (Franke and Miller, 2007) and also culture and convergence (Franke, 1999) were evaluated as performance strategies for “first” and “second” world countries, showing that capital utilization (with compatible culture) rather than the rate of investment seems to benefit economic growth, regardless of underlying socio-political system. Based on a study of several hundred firms in China, Davies and Walters (2004) found that respondents felt their economic performance was more a function of locating in munificent environments and emphasizing satisfaction of customers’ needs than it was of adopting a particular strategic direction.

Ricart and colleagues (2004) have summarized the status of research pertaining to international strategy, with particular emphases on the consequences of geography and the locations of various parts of different firms. In addition, they note the substantial missed opportunities for business as an effect of having more than half of the world’s population living in poverty and essentially outside the broader commercial system. Research by London and Hart (2004) indicates that strategists who are seeking to serve the developing majority of the world’s population by applying to them models taken from post-industrial markets may be missing significant opportunities. They argue that corporations need to develop a competence they call “global capability in social embeddedness” if they expect to prosper in distinctively different socioeconomic environments. Hence, a resulting issue for corporate leaders and researchers might be to further refine the conditions under which elements of recent scholarship will lead to improved organizational performance.

The idea of “economic clusters” being important to the success of some firms and economic regions (Porter, 1990) has been applied in both international and local settings. A strong component of many such analyses has been the role of indigenous technical training as a means to facilitate higher value-added work. Given that many companies feel that the technical component of strategy has been growing rapidly in importance in various sectors of the economy, the search for both economies and speed has led to the global sourcing of R&D or innovation activities, particularly to countries which have invested heavily in systems for technical education (Engardio and Einhorn, 2005; Williamson and Zeng, 2004). On the other hand, the physical co-location aspects of the “cluster” concept are being challenged by researchers who feel that highly efficient telecom services may be reducing the importance of geography in many high-tech sectors (Tallman et al., 2004).

The variety of technological factors influencing strategy was illustrated recently in a Special Issue of the *Strategic Management Journal* (McEvily et al., 2004). Topics ranging from the idiosyncratic origins of technologies to the management of supporting processes in MNCs were covered by various authors. The increasing importance of “globalizing” the innovation process has been the focus of work by Santos and colleagues (2004). At the same time that substantive innovations need to be matched to customers’ interests, researchers have been developing concepts for retaining

intellectual property rights (IPR) in the name of the organization which has made the developmental investment (Reitzig, 2004).

While macro-level decisions involving the structure of “economic [or industrial] clusters” and associated technologies have been important to strategy research, there are other fundamental issues evolving from the values of customers, employees and participating citizens. The work of Nobel Prize winner Amartya Sen (2003) underscores the importance of “freedom” and perhaps democracy as basic human values in contrast or in addition to “wealth or income.” The issue of consumers’ sense of well-being is further influenced by the “paradox of choice,” as articulated by Schwartz (2004). If the paradox about personal satisfaction declining when choices for a given individual exceed a certain number proves to be widespread, then strategists may need to shift their thinking away from “mass customization” and toward a different notion of “requisite variety.” For strategic management researchers to “take business seriously,” they may need to address the variety of performance outcomes of interest to the broader society, or risk being viewed as treating “economics as religion” (Nelson, 2001; Veblen, 1998 [1898]).

Another piece of research aimed at integrating parts of “the big picture” was developed by Stimpert and Duhaime (1997). Their empirical work joined the industry, corporate and business levels of analysis in an assessment of organizational performance. More recent work by Helfat and Eisenstadt (2004) has addressed the organizational design issue of when external markets provide more or less efficiency and effectiveness than do internal markets. For example, organizational “modularity” for achieving benefits of related-unit diversification over time and thus permitting *inter-temporal* economies of scope often may be just as important as *intra-temporal* economies arising from close subunit coordination.

As legal entities seek to provide a bridge to external markets, the importance of various network and alliance configurations becomes important to strategists. Such relationships have been studied in several different settings, including cooperative-competitive networks (Madhavan et al., 2004). Strong “internetworking” systems have been shown to facilitate external partnering (Brews and Tucci, 2004) among organizations. A subset of general network structures involves those supporting sophisticated supply chain management functions and the benefits which they can provide to corporate strategies (Hult, et al., 2004). Other networks have been studied in the context of innovation and related product launches (Venkatraman and Lee, 2004). In related work, customer learning processes have been studied in relationship to the strategies selected by firms (Zahay and Griffin, 2004).

The study of strategic resources and related valuations inevitably leads on to questions pertaining to the sustainability of physical ecosystems, so that domain has also been receiving increased attention by a number of researchers (Bansal and Clelland, 2004; Bansal and Roth, 2000; Branzei et al, 2004; Christmann, 2004; Cordano and Frieze, 2000; Economy, 2004; Flannery, 2005; Franke et al., 2005; Freeman, et al., 2000; Geyer and Jackson, 2004; Hart, 1997; Hollander, 2003; Lovins, 2004; Marcus, 2004; Russo, 2003; Schelling, 2006; Shrivastava, 1995). In spite of more than a decade of strategy research and a longer stream of effort among natural and physical scientists, many atmospheric and oceanographic analysts in Europe, Asia and North America remain quite concerned that corporations, governments and individuals are not modifying their behaviors fast enough to avoid costly problems in the next quarter

century (Harvey, 2005; Holdren, 2006; Scheiermeier, 2006; Schneider, 2005; Stern, 2007; Witze, 2006) – the relatively short period of time during which the *Strategic Management Journal* has been published. Multimillion dollar decisions by BP (formerly British Petroleum), HSBC (Hong Kong Shanghai Bank Corp), Toyota, DuPont, Interface, Albertson's, General Electric, Marks & Spencer, Wal-Mart and many others have served to illustrate both the perceived need for societal action and the technologies available for current implementation, but it remains to be seen how societies will evaluate the overall performance of companies, industries and governments.

If one chooses to assess corporate performance in terms of a comprehensive environmental perspective, then some of the conflicts surrounding the evolution of the World Trade Organization (WTO) can be interpreted as reflecting the perspectives of different stakeholder groups and the goals they hold for business entities (Freeman et al., 2004; Post et al., 2002; Sundaram and Inkpen, 2004). While some stakeholders focus their attention on longer-term collective benefits, others choose to emphasize the short-term costs or rewards to specific individuals. At issue in many of these stakeholder conflicts may be the fundamental purposes of business organizations or what Giacalone (2004) terms the “transcendent goals” of both businesses and education of the managers who guide them. A general framework for considering performance criteria within such a multi-level a control system context has been offered by Grant and Rajagopalan (2001), and a broader set of criteria has been suggested more recently by Epstein and Roy (2003).

Where there is discussion of appropriate performance criteria for corporations, a related issue regarding the types of organizations which might most successfully serve various functions within the economy often is addressed. For example, Grant (1988) illustrated different possible levels of participation across stylized sectors of the economy, and Mintzberg (1996) developed an extensive explanation for why different countries might choose to have various levels of private, NGO, and government participation in various parts of their economies. The effects of NGOs on strategies of private sector firms have been documented by Doh and Teegen (2003) and Argenti (2004). In a series of analyses with emphasis on the healthcare sector, Bornstein (2004) has shown how stakeholders have learned to bridge social system failures between the private and governmental sectors in the name of “social entrepreneurship.” Related study by Taylor (2005) has shown how the “fair trade” initiative within the coffee industry and the “sustainable forest” efforts within the timber industry have altered the dimensions of competition through the value chain. In short, some people seem committed to supporting NGOs that are willing to replace the roles of corporations and government agencies when they feel their interests are not being served adequately. The intersection of research involving a variety of performance criteria and the mix of organizational types to be measured should be an increasingly useful one over time.

Institutional roles that strongly influence the strategic contexts for firms have been studied by strategy researchers and others for many years. Among the earlier pieces of research involving the active intersection of governmental strategists and those in the private sector was the book by McArthur and Scott, *Industrial Planning in France* (1970). Smeltz and Miller (1988) analyzed the intense interactions between an important financial regulatory agency and the firms being regulated in the case of the Financial Accounting Standards Board (FASB). Studies such as these set the stage for

the development of a system of “non-market strategies” (Baron, 1995). Spencer et al. (2005) illustrate four types of national political institutional structures and selected countries fitting each category. The interactions among strategists in various sectors of such multi-level, multi-system contexts (Starik and Rands, 1995) can be seen in Christmann’s (2004) study of MNCs, which showed that such firms tend to standardize environmental policy dimensions in response to stakeholders, but this action then reduces the firms’ capacities to exploit cross-country variations in regulatory regimes. Even more recently, Bonardi and Keim (2005) have analyzed corporate political strategies for dealing with broadly recognized issues facing firms. Such work seemingly will be increasingly important as advanced information technology conveys the interests and concerns of customers, NGOs and governments more broadly, cheaper and faster.

Space limitations for this review of advances in strategic management have necessarily led to the omission of many papers deserving of recognition. However, their diversities of topics and publication channels suggest the reasons for the research challenges which seem to lie ahead.

## V. EVOLVING RESEARCH CHALLENGES

We can be encouraged by the advances in strategic management research during recent years, but participants in the field need to be prepared to accept the evolving requirements which lie ahead.

Identification of the relevant system for analysis seems to be a growing challenge as networks and clusters are connected with words, sights and sounds via the internet in largely invisible and almost costless ways. Organizations that are legal entities for accounting purposes may extend more broadly through important but informal alliance systems involving “untraded” interdependencies.

Measurement of commonly acceptable performance outcomes faces additional obstacles as many investors and other members of society look beyond shareholders’ financial wealth maximization to other criteria, whether they be characterized in terms of social responsibility, ecological footprint, or net greenhouse gas emission levels (Epstein and Roy, 2003; USGAO, 2004). Determining accounting for GHGs may become as complex a measurement problem as that for recording and disclosing stock option awards, as those seeking to implement the European Union’s Emissions Trading Scheme (EU-ETS) are discovering (Murray, 2005).

Environmental or contextual analyses which help researchers distinguish firms and industries that are competing primarily among themselves from those which are impacted substantially by government-level strategies and those of major NGOs will be important to the understanding of successful strategies. Starik and Marcus (2000) have illustrated ways in which such a breadth of perspective can be helpful, and other good examples may exist.

Depending on the extent to which society’s concept of the “environment of business” evolves during the next few years, there may be increasing need for multi-attribute performance measures in more types of research (Porritt, 2005). If “tipping points” occur as a result of atmospheric or oceanic changes, then concepts of risk management and contingency planning may become much more prominent aspects of the research and management agenda (Daly, 2005; Gore, 2006). But, according to

Ruddiman (2005), for 8,000 years human-economy-sourced environmental warming—due to emissions of CH<sub>4</sub> from wet rice farming and of CO<sub>2</sub> from land clearing and later from burning fossil fuels—has created *beneficial* climatic changes. Since the beginnings of agriculture, followed by industry, humankind has offset a 100,000-year astronomically determined glacial cycle. The major “global warming” problem seems to be budgeting fossil fuel consumption and GHG production as needed over the next 90,000 or so years. First we need to avoid climate shocks such as a halt to the Gulf Stream, which in the short term could devastate the global economy. Then we need to conserve fossil fuels in order to release CO<sub>2</sub> gradually, to hold back the cycle’s global cooling and glacier formation. For this, our collective strategic management perspective must become very long term.

As the above issues are addressed, research methods will test new hypotheses, in some cases with new types of data. Advancing the constructs (Venkatraman and Grant, 1986), documenting the interrelationships (Burgelman, 2002), and improving the measurements (Boyd et al., 2005; Franke et al., 2007) and the modes of analysis (Camerer and Fahey, 1988; Ketchen et al., 2004) are among the methodological enhancements which will be sought. Nonetheless, there still are serious socio-legal constraints on applications of social sciences to business activities, which can adversely affect performance, as illustrated by Barrett (2007).

Additional debates will arise regarding the best ways to structure and distribute new knowledge in order to achieve intended effects. For example, Bennis and O’Toole (2005) question whether many business schools have become overly committed to what they describe as the “scientific model” of learning rather than the “professional model,” which they attribute to many law schools and medical schools. Podsakoff et al. (2005) found management journals during two recent decades to be focused very heavily on relationships among academics, rather than on potential and actual use by management practitioners. In a similar spirit, Ramos-Rodriguez and Ruis-Navarro (2004) assessed the “intellectual structure of strategic management research” by analyzing the contents of the *Strategic Management Journal* during 1980-2000.

Another domain of research which may have increasing importance in the strategy domain involves “other-regarding preferences,” as opposed to “self-regarding preferences” upon which much existing research is based (Camerer and Fehr, 2006).

In spite of the best efforts of thoughtful researchers and practitioners, there will be many key elements of strategy which will only be partially understood for many more years. In view of such probable circumstances, strategists might be well advised to follow the “precautionary principle” ([www.PPrinciple.net](http://www.PPrinciple.net)) in domains with long-term consequences. Making strategic choices with a precautionary perspective might constitute another form of “option” in the minds of some analysts.

## VI. CONCLUSIONS

In summary, there have been many advances in strategic management during recent years, but much remains to be accomplished if the field is to serve businesses and societies during the years ahead. For example, a range of stakeholders will be watching the performance of companies and judging them according to the criteria which they feel are important at the moment. As a result, more attention may need to be given to a

broader set of performance criteria, which in turn will need to be measured in cost-effective ways.

Others will be asking from various political perspectives about the appropriate roles for different levels of government and various NGOs in shaping the context for private sector actions. Such questions will be answered in part by the sensitivity of groups to the perceived condition of collective goods, e.g., atmospheric and ocean conditions. Hence, the technical and communication skills of strategists and their media advisors will shape the global contexts within which decisions about products and services, operating processes and reporting expectations will be shaped.

If “strategists” from many sectors can learn to collaborate in increasingly sophisticated ways, the opportunities for improved research and greater understanding of both social and physical ecosystems will be particularly great during the years ahead.

This lead article for the series on “Taking Business Seriously” introduces and places in context the five more specialized articles. It also points to the critical importance of strategic management for our societies and economies, as well as for our corporations and other organizations.

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