Strategic Process Models for Sustainability

Parshotam Dass[1] and Senthil Muthusamy[2]

Abstract[3]

The objective of this paper is to explore strategic process models for sustainability. Strategic management helps deal with "messy" problems by integrating multiple, even conflicting, factors through models of strategic processes. A survey of strategic process research provides five broad overlapping but distinct models that have immense potential. These models include guided evolution, learning and competencies, institutional and structuration complexity, and critical and postmodern approaches. These strategic process models could be further integrated for developing actionable knowledge and knowledgeable practice of sustainable management in organizations in the future.

1. Introduction

The study of sustainability is scattered over numerous disciplines and fields of research. These disciplines have their favorite perspectives and appear to explain different aspects of the same organizational reality using diverse theories. According to Garud and Van de Ven (2001), "It is easy to get lost in the complexities theories and observations of strategic organization change processes unless we possess a systematic way of understanding this ever growing literature" (p. 42). Therefore, it may make sense to combine different explanations and come up with a few competing and complementary models that can help us understand and guide the theory and practice of sustainable management. The modern concept of strategy refers to the pattern of decisions and actions over time (Mintzberg, 1978). The field of strategy—strategic management—is distinguished by its integrative approach, which brings together perspectives from various disciplines to propose models of strategic processes. These models of strategic processes are particularly relevant for problems that are termed as "wicked" or "messy" (Rittel and Webber, 1973) such as the issue of sustainability in organizations. "Wicked" problems are the result of "organized" complexity (that cannot be dealt with by a random sample) and are

[1] Faculty of Management, Asper School of Business, University of Manitoba, Winnipeg; email: pdass.mgt@gmail.com

[2] School of Business, Macon State College, The University System of Georgia, Macon, GA 31206, U.S.A.

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characterized by interconnectedness, complicatedness, uncertainty, ambiguity, conflict as well as social constraints. Wicked problems may need participative, adversarial, integrative, and managerial thinking process, such as involved in dialectical inquiry and devil's advocacy rather than simply expert methods or atomistic solutions (Mason and Mitroff, 1981).

Sustainability has been thought in terms of economic prosperity, social equity, and environmental integrity (Bansal, 2005). Thus, organizations may adopt sustainability for competitiveness, legitimacy, and social responsibility (Bansal and Roth, 2000; Levy, 1997). Scholars have reflected on the past accomplishments and future challenges (e.g. Starik and Marcus, 2000) and suggested various paradigms for organizations to be technocentric, econocentric, and sustaincentric (Gladwin, Kennelly, and Krause, 1995; Shrivastava, 1995). How does strategic management integrate various factors to deal with the wicked problems such as sustainability? A review of literature on strategic processes may reveal an answer to this question. In our search, we found several theoretical models that could be combined in a single process model or could be represented as separate models (Mintzberg, 1990). However, we were immediately faced with the question: How would these different models combine *in practice*? A review of recent qualitative research helped identify five broad overlapping but distinct models that can be blended further for sustainable management. These models integrate economic, social, cultural, political, technological, and other influences through various processes to induce inertia as well as change in distinct ways in varied contexts.

The objective of this paper is to explore the strategic process models for sustainability. The paper is organized as follows. First, we define the concept of process used here and its relevance for a qualitative approach. Then, we provide an introduction to the strategic process literature in order to provide its background and overview. Next, we present five broad models that can be used for research and study on sustainable management in organizations. Finally, we conclude the chapter by reviewing the lessons learned, limitations and avenues for future research. It is expected that sustainable management research and practice will benefit from the models of strategic processes presented here.

2. The Concept of Process: A Qualitative Approach

To examine the strategic process models for sustainability, we will propose models based on a rich concept of the process that is used in qualitative studies. Therefore, let us begin by clarifying the two critical issues: The concept of process and the importance of examining it in in-depth qualitative studies.

First, it is important to examine what concept(s) of the process is (are) being used in a study. Van de Ven (1992) and Mohr (1982) propose three views of process: a) Process is used to explain causation between the variables to test variance theories without directly observing the process. Consistent with Van de Ven and Huber (1990), we agree that this is a highly restricted use of the process. b) Process is frequently used as a category of concepts that refer to actions of individuals or organizations. For example, Priem (1992) and Miller and Friesen (1984), among others, measured strategy making processes, such as scanning, analysis, and planning. In this view, the process constructs are operationalized as variables. What is measured is the change over different points of time rather than the 'how' aspect of change. In other words, similar to the first concept of process, this conception may not require directly examining the activities involved. c) The third use of process is as a sequence of steps that describes the pattern over time, which is consistent with the dictionary meaning of the term process. For example, Cohen, March, and Olsen (1972), Greiner (1972), Mintzberg, Raisinghani, and Theoret (1976), and Quinn (1980) examined various processes of change using different theories. This last view provides the richest concept of the process and requires a direct examination of the activities involved. Therefore, in this paper, we will use the third concept of process (i.e., process as a series of steps).

The second critical issue is the range of research methods involved. Much has been written about the quantitative/deductive and qualitative/inductive research methods. There have been extensive debates about appropriate methodology for conducting research on process. For example, Inkpen (2000) objected to the use of simplistic process model on the dynamics of learning alliances by Khanna, Gulati, and Nohria (1998). In their response, Khanna, Gulati, and Nohria (2000) distinguished between 'dirty hands' and 'clean models'— qualitative and quantitative approaches to modeling, respectively, and saw them as complementary rather than incompatible models in the examination of organization and management processes (Hirsch, Michaels, and Friedman, 1987). More specifically, they used an economic modeling (game theoretic) approach to racing behavior in learning within alliances. Khanna and colleagues (2000) claim that their model meets the requirements of a process *and* a content model. Apparently, these and other authors have varying concepts of the process (the first point raised above in this section), which may at least partially explain their differing points of view regarding the appropriate methodology for studying process. However, it may be helpful to understand 'dirty hands' models and make an attempt to 'clean' them in subsequent steps. At the same time,

researchers may need to make the 'clean' models more sophisticated (Ofori-Danka and Julian, 2001).

In contrast to 'clean models' perspective, we follow a 'dirty hands' (or qualitative) approach (Hirsch, Michaels, and Friedman, 1987; Khanna *et al*., 2000) in this paper. We agree with Khanna and colleagues (2000) in general that 'clean models' (generated through quantitative research approach) and 'dirty hands' models (generated through messy, in-depth, qualitative studies) are complementary approaches. However, it is more important to match the phenomenon of interest with the relevant research methods. In this study, our focus will be on qualitative models due to the following reasons: a) we are interested in rich descriptions, analyses, and explanation of the process and its relation to content and context; b) there is considerable gap in the literature on reviewing these studies because they are complicated, time-consuming, and messy; c) it is important for the field to try to accumulate qualitative research because of its potential for generating insights that can later lead to 'clean models'; and d) individual researchers don't have the time and energy to review them but can use the cumulated findings to integrate with 'clean models.' In other words, the study of sustainable management and strategic processes is an area where messy, in-depth, and detailed qualitative studies can be particularly useful.

Before going into the details of current research and proposing models of strategic processes relevant for the theory and practice of sustainability, it may be useful to give the background and overview for the study of strategic processes in organizations.

3. Strategic Process in Organizations

Over the years, several models of the strategy process and content have emerged. A reader of sustainability may already be aware of some of these schools such as SWOT (strengths, weaknesses, opportunities, and threats) analysis, institutional theories, and stakeholder approaches that have been used in sustainable development in the past. Other schools though unfamiliar may provide stepping stones to understanding the role of strategic management for sustainability.

The classic models of strategic process may range from the Harvard Business School's design (involving strengths, weaknesses, opportunities, and threats e.g. Andrews, 1971, planning (e.g. Ansoff, 1965), industrial organization economics and positioning (e.g. Porter, 1980) to the cultural approaches (e.g. Peters and Waterman, 1982). These were followed by other approaches such as cognitive (e.g. Huff, 1990), learning (e.g. Crossan, Lane and White, 1999), emergent strategy (Mintzberg, and Waters, 1985), configurational (Mintzberg

and McHugh, 1985), and resources, and capabilities (Barney, 1991; Wernerfelt, 1984; Hamel, and Prahalad, 1994), among others. Several scholars have provided conceptual foundations and classification frameworks to organize the complex array of approaches (Chakravarthy, and Doz, 1992; Chakravarthy, Mueller-Stewens, Lorange, and Lechner, 2002; Mazzola, and Kellermanns, 2010; Olk, 2010; Pettigrew, 1992). For example, Scott (1998) categorized them into the rational, natural, and open systems models, and examined their interplay with one another (e.g. rational-natural systems). Similarly, Chakravarthy, and White (2001) brought them together in a schema of four perspectives of rational, political, evolutionary, and administrative.

Likewise, developing a broad framework, Mintzberg, and his colleagues (Mintzberg, 1990; Mintzberg, Ahlstrand, and Lampel, 1998; Mintzberg, and Lampel, 1999) organized them into ten process schools. The nine schools are as follows: design, planning, positioning, learning, cultural, environmental (including institutional and evolutionary approaches), political (including stakeholder, and network perspectives), cognitive, and entrepreneurial. The tenth school is titled configurational, which may combine the other nine schools in a single process of management. Other scholars may differ on where and how a process school should be categorized. For example, Mintzberg and associates have used resource-based theory in terms of culture, and learning, whereas others may categorize it as a part of economic or design schools. Nevertheless, this typology represents an outstanding, and comprehensive framework from an academic point of view, and provides a bird's eye-view of strategic processes in organizations.

Interestingly, Mintzberg, and associates (e.g. Mintzberg *et al.,* 1998; Mintzberg and Lampel, 1999) have posed the question: Is it one process or different approaches. In other words, could these different processes co-exist in a single overall process or do they represent incompatible models? It is difficult to answer this question *theoretically* because organizations have consistencies as well as contradictions. Therefore, 'how' and 'which' of these schools are used simultaneously, and under what conditions can only be observed in *empirical* studies. Moreover, the same mechanisms (or motors) may combine in different ways or the dynamics of different combinations may vary from one another. In addition, the properties of these combinations may be vastly different from one another.

Reviewing empirical studies of the processes of development and change, including strategic processes, Van de Ven (1992) developed a taxonomy of four broad theories and argued that they used four motors: teleological, life cycle, evolutionary, and dialectical. Van de Ven and Poole (1995) further explicated

these broad process theories and motors and showed how different theories represented illustrations of single-, bi-, tri-, and quad-motor theories as well as gaps in the literature. Garud and Van de Ven (2001) extended this agenda further and argued that in reality, these theories and motors were likely to combine in dynamic, even non-linear ways.

Austin and Bartunek (2003) complemented Van de Ven and Poole's (1995) framework of four motors from change process theories with four motors of implementation theories used in practice: participation, self-reflection, action research, and narrative/rhetorical intervention. These frameworks can be helpful in exploring the evolving new models that examine rich descriptions of the strategic processes and may combine motors from academic as well as practitioner perspectives and their dynamic interactions.

4. Models of Strategic Process for Stability

In this section, we introduce models that specify the integrative role of strategic management. These models encompass varied, even conflicting factors such as intended and emergent strategies, structure and human agency, and individual and collective influences. They may have some overlapping mechanisms as well. A review of the literature on strategic processes leads us to believe that the following five broad, overlapping but distinct models have immense potential for sustainability in organizations in the future. Moreover, these models can be blended further to provide rigorous frameworks relevant for varying contexts to understand and guide research and practice for sustainability.

4.1 Guided Evolution

This model has its origins in Bower's (1970) resource allocation model that focused on the teleological paradigm. Others who have made major contributions to the development of this model over the years include Bower (e.g. Bower and Doz, 1979; Noda and Bower, 1996) and Burgelman (1983, 1994). For instance, using the Bower-Burgelman model of iterative resource allocation at multiple levels, Noda and Bower (1996) analyze strategy-making processes leading to different courses of action at Bell South and US West corporations. Similarly, Smith and Zeithaml (1999) examine the strategy-making processes of international expansion at seven regional Bell operating companies. Likewise, Lovas and Ghoshal (2000) propose a guided evolutionary model in their study of Oticon, a Danish hearing aid company.

Winn, and Angell (2000) propose four models for internal corporate greening process for environmental management—deliberate proactive, deliberate reactive, emerging active, and unrealized and examine each in a firm in consumer goods industry in Germany that are subject to the 1991 German Packaging Ordinance. Malnight (2001) assesses the emerging process structures in two pharmaceutical multinational companies using a longitudinal matched-pair analysis. Using nine case studies in Australian firms, Kiridena, Hasan, and Kerr (2009) explore alternative deeper structures in manufacturing strategy formation processes using various patterns in the initiation, consolidation, commitment, and realization of their strategic initiatives. Klingebiel, and De Meyer (2013) analyze adaptive decision-making microprocesses during the implementation of a strategic initiative when managers become aware of specific new information providing certainty or uncertainty.

The guided evolutionary model emphasizes the interplay of academic- and practice-oriented motors—teleological (e.g. top management goals), ecological (variation-selection-retention; Lovas and Ghoshal, 2000), and participation (e.g. of middle, and lower level managers in new product development in Intel, 3M, etc., Burgelman, 1983, 1984) and gives some consideration to other motors such as life cycle and action research as well.

4.2 Learning and Competencies

The learning and knowledge creation views have emerged from the writings of Argyris, and Schon (1978), Brown, and Duguid (1991), Crossan, and associates (1999), Lave and Wenger (1999), Nonaka (1994), Polanyi (1966), and Senge (1990), among others. This model represents a combination of cognition, situated learning (Lave and Wenger, 1991), cognitive maps (Barr, Stimpert, and Huff, 1992), dominant logic (Cote, Langley, and Pasquero,1999; Prahalad and Bettis, 1986), and core competencies and rigidities (Hamel and Prahalad, 1994; Leonard-Barton, 1992). It may also incorporate strategic leadership (Denis, Langley, and Cazale, 1996; Denis, Lamothe, and Langley, 2001), and natural resource–based view of the firm (Hart, 1995). In addition, it may include the dynamic capabilities model, which combines the design, evolutionary, and learning processes. It complements the more objectivist emphasis of the traditional models (Bower, 1970) and demographic studies of the upper echelons perspective (Hambrick and Mason, 1984) represented by the guided evolutionary model.

Several empirical studies document the use of this model in a variety of settings around the globe to develop and use their resources and capabilities, and to co-evolve their strategies and competencies over time. For example, Sharma

and Vrendenburg (1998) analyze the strategies and capabilities of the oil and gas companies in Canada for stakeholder integration, learning, and continuous improvement. Maritan (2001) employs a grounded process model in a Fortune 500 paper and pulp company to understand their varying capital investment processes for existing, and new capabilities. Crossan and Berdrow (2003) investigate the multilevel process of learning and strategic renewal at Canada Post Corporation using the 4I model of intuiting, interpreting, integrating, and institutionalizing. Zietsma, Winn, Branzei, and Vertinsky (2002) also use the 4I learning model in their study of learning processes in a forest company in Canada that adopted sustainable forest management after years of resisting its stakeholder pressures.

Garud and Kumaraswamy (2005) explore the positive and negative roles of knowledge management using virtuous and vicious cycles in Infosys, a multinational computer software company from India. Salmador and Bueno (2007) investigate the knowledge creation process using Nonaka's mechanisms for socialization, explication, combination, and internalization in a virtual (Internet) banking company in Spain. Swart and Powell (2006) use qualitative system dynamics and knowledge mapping to study system based knowledge management using tacit and explicit knowledge in a professional accounting, and financial services company in the United Kingdom (U.K.). Regnér (2003) combines an in-depth study of strategy creation in a Swedish company in the truck-trailer coupling using hydraulic systems with retrospective accounts in Ericsson, Pharmacia, and AGA to suggest that the managers at the periphery followed an inductive, and exploratory approach, whereas executives at the center used a deductive and exploitative approach. Montealegre (2002) assesses the emergent process of capability development in an Ecuadorian stock exchange using resource based view of the firm regarding its electronic commerce strategy. Rindova and Kotha (2001) propose continuous morphing as a mechanism in their examination of transformations at Yahoo and Excite—two Internet firms using the concepts of dynamic capabilities, and strategic flexibility. Keil, McGrath, and Tukiainen (2009) study the internal corporate ventures at a large European electronics manufacturer, and report that the ventures co-evolved to contribute to develop and transfer capabilities in the firm.

In addition to the rational aspects of teleological motor, and the evolutionary motor that it has common with the guided evolutionary model, the learning, and competencies model explicitly calls attention to the more cognitive, and enactment aspects of the teleological paradigm, self-reflections of the practice-oriented motors, as well as the dialectical motor (e.g. thesis-antithesis-synthesis) in management processes. One may speculate that whereas ecological

motor (e.g. competition) receives more attention in studies within the United States, the dialectical motor (e.g. conflict) may attract more notice in other countries. In addition, scholars have noted the positive as well as negative perspectives of learning and competencies (Coopey, 1998; Driver, 2002; Leonard-Barton, 1992; Snell and Chak, 1998).

4.3 Institutional and Structuration

Several researchers use the institutional approach (DiMaggio and Powell, 1983) to examine strategic process in various organizations and industries. For example, Fox-Wolfgramm, Boal, and Hunt (1998) examine the incremental change processes in organization and strategic spheres for prospector and defender banks in the United States in response to institutional changes involving regulation using a grounded theory approach. Levy and Rothenberg (2002) analyze the divergent strategic responses of firms in the automobile industry (DaimlerChrysler, Ford, General Motors, and Volkswagen) regarding their environmental strategies in response to shifting perceptions of climate change in the institutional environments.

Structuration theory (Giddens, 1979) integrates the use of agency and structure rather than treating them separately. Pozzebon (2004) reviews several studies from 1995-2000 and concludes that concepts from the structuration theory have often been incorporated into other theories such as institutional theory. This model appears to be using some of the same motors as the learning and competencies model though the interplay among them is conceptualized in more complex terms and in a recursive manner (Barley and Tolbert, 1997; Jarzabkowski and Wilson, 2002). Structuration theory and its variants may combine elements from decision making school and institutional theory (DeSanctis and Poole, 1994) and can help understand the development and use of technology in organizations (Orlikowski, 1992). Barley and Tolbert (1997) propose that studying institutionalization as structuration can bring rich insights. Windeler and Sydow (2001) in their study of project networks in television broadcasting in Germany assert that structuration theory can help understand the co-evolution of organizational form and industry by blending ideas from industrial organization and institutional theory. Using structuration theory, Heracleous and Barrett (2001) examine the conflicting and cooperative dynamics of various stakeholders' communicative actions and deep structures in the failed implementation of electronic placing system at the London Insurance Market network. Jarzabkowski (2008) uses the structuration theory to examine strategizing behavior by top managers at three universities in the U.K. She concludes that both sequential and simultaneous approaches to shaping strategy

are likely to be successful in weakly institutionalized environments, whereas the simultaneous approach is likely to be more successful in strongly institutionalized contexts.

Garud, Jain, and Kumaraswamy (2002) analyze institutional entrepreneurship at Sun Microsystems using structuration and coopetition as mechanisms in the emergence of Java as a technological standard. Likewise, using the case of a European non-governmental organization (NGO) working in Palestine, Lawrence, Hardy, and Phillips (2002) investigate how interorganizational collaboration through structuration can lead to proto-institutions. In a theoretical treatment, Hargrave and Van de Ven (2006) introduce a collective action model of institutional innovation based on insights from the technology innovation and the social movements literatures, viewing it as a dialectical process. The environmental movement can help institutional entrepreneurship in new green power generation opportunities and deinstitutionalize non-green alternatives (Hiatt, Sine, and Tolbert, 2009).

4.4 Complexity Theory

Similar to structuration theory, complexity and chaos theories are imported from other areas and are used more in organization theory than in strategy research. This model uses several motors including teleological, life cycle, evolutionary, action research, participation, self-reflection, and narrative. However, the interactions among these motors seem to be modeled at a preliminary level. Based on increasing interest in the complex adaptive systems (e.g. Anderson, 1999), this framework appears to have an immense potential to model the sophisticated interactions in the future.

Though currently used in mostly simulation (e.g. Davis, Eisenhardt, and Bingham, 2009; Levy, 1994) and theoretical research (e.g. Cunha and Cunha, 2006) on a wide range of issues from strategic change (Stacey, 1995) to leadership (Uhl-Bien, Marion, and McKelvey, 2007) to project management (Aritua, Smith, and Bower, 2009), and a limited number of empirical studies, they are emerging as potentially useful and robust models for understanding strategic processes. For example, Brown, and Eisenhardt (1997) examine nine strategic business units of different firms in the U.S., Europe, and Asia where stability and unpredictability (e.g. in high velocity environments) give rise to self-organizing, probes into the future, and semi-structures to undertake continuous change. Eisenhardt, and colleagues (Galunic, and Eisenhardt, 2001; Helfat and Eisenhardt, 2004) in their studies of a Fortune 100 U.S. corporation in the high-technology, field reveal how executives can use patching to restitch their modular divisions, and capabilities over time in changing environments to

build an organization as a dynamic community. Hundsnes, and Meyer (2006) provide an example of Telenor—the Norwegian telecommunication company—on how it was organized and reorganized using the concept of patching. They argue that the firm had to deal with the paradoxes of centralization vs. decentralization, and similar vs. different patches. Too many different patches with centralization or too many similar patches with decentralization can lead to chaos, whereas too many different patches with decentralization or too many similar patches with centralization can lead to stability, and inertia resulting into a lack of co-evolution. Thus, they argue that moderate levels of centralization-decentralization, and relatedness (similar vs. different) are needed to be at the edge of chaos.

Van de Ven and Poole (1995), after reviewing process theories of organizational development, and change, turn to their interplay, and complex dynamics. Continuing with their journey in Garud, and Van de Ven (2001), they remark, "While each of these types has its own internal logic, complexity, and the potential for theoretical confusion arise from the interplay among different motors," (p. 26) and focus their paper on complex non-linear dynamics, including increasing returns, and other properties of complex adaptive systems. Similarly, in a special issue of *Organization Science*, Anderson (1999) describes the four well-known properties of complex adaptive systems: a) agents with schemata; b) self-organizing networks sustained by importing energy; c) co-evolution to the edge of chaos; and d) recombination and system evolution.

Using examples of two entrepreneurial firms, Lichtenstein (2000) examines the assumptions of complexity science and proposes a model of transformative change and development in complex adaptive systems. Likewise, MacIntosh and MacLean (1999) propose three-stage process of conditioned emergence—conditioning, creating far from equilibrium conditions, and managing the feedback processes—and illustrate with two examples of how it works in practice. Macbeth (2002) shows the application of a similar process in supply chain management. These processes can be particularly useful when environments are complex and unpredictable, for example, in new green power generation opportunities (Davis et al., 2009). Boisot and Child (1999) propose two strategies for western firms to deal with complexity in the Chinese environment: complexity absorption and complexity reduction. In their study of hospitals in the U.S., Ashmos, Duchon, and McDaniel (2000) find that organizations that had the complexity absorption response as compared to complexity reduction response perform better in turbulent, complex environments. Similarly, in his study in South Africa, Mason (2007) reports that more successful firms in turbulent environments use radical, fast, and disruptive

strategies using a bottom-up, adaptive, and emergent process. Finally, Houchin and MacLean (2005) in their four-year ethnographic study of a public-sector organization in the U.K. note the merits and limitations of the complexity theory, and suggest ways to improve it for application to management.

4.5 Critical and Postmodern

The critical and postmodern models seem to focus their attention away from the currently dominant teleological, and ecological motors and more toward dialectical and narrative motors, and their interaction, particularly in multinational and multicultural settings that call attention to diverse perspectives, discourses, and attempt at sense-making. These models take into consideration the role of self-reflection, and participation motors as well. The models include theoretical (e.g. Alvesson and Deetz, 2006; Barry and Elmes, 1997; Knights and Morgan, 1991; Levy, Alvesson, and Willmott, 2003) as well as empirical work (e.g. Knights, and Morgan, 1995; Laine and Vaara, 2007; Levy and Egan, 2003; Vaara, 2002). For instance, Levy, and Egan (2003) investigate the corporate political strategies of conflict, and accommodation by global climate coalition that represented about 40 U.S. companies, and industry associations, which had major stakes in production, and use of fossil fuels.

Several researchers examine varying roles of different types of discourses in organizations. For example, Hardy, Palmer, and Phillips (2000) show how discourse can be a strategic resource by illustrating the case of an individual to bring about change in an international NGO. Vaara (2002) reports that the rationalistic discourse is used as the dominant discourse, whereas cultural, role-bound, and individualistic discourses act as alternatives to construct success and failure in narratives of post-merger integration in eight Finnish-Swedish mergers and acquisitions. Maitlis and Lawrence (2003) analyze the failure of strategizing at a British symphony orchestra due to discourse and politics. Using the discourse perspective in an ethnographic study of building a manufacturing facility in a firm, Samra-Fredericks (2003) documents how strategists become effective in everyday conversation about strategy. Laine and Vaara (2007) examine strategic development from the top, middle, and lower levels using a critical discourse perspective to reveal the dialectical struggle between control and resistance in an engineering and consulting firm in Northern Europe. In their study of 12 professional services organizations in Finland and other Nordic countries, Mantere and Vaara (2008) investigate discourses that promote and impede participation in strategic practices in organizations. Balogun, Jarzabkowski, and Vaara (2011) study the role of three discourses—selling,

resistance, and reconciliation—in the political dynamics and evolution of parent-subsidiary relationships in multinational enterprises.

4.6 Blending the Models

There may be other models or their composites that could be used in an examination of strategic processes in sustainable management. For example, Weick's (1979) sense-making can be used by itself or in combination with other models. Similarly, Bogner, and Barr (2000) propose an adaptive sensemaking process, which can explain the institutionalization of hypercompetitive mindset in firms, and industries such as digital telecommunication. In fact, there is a realization that the "neatness" of the strategic process typology (Mintzberg, 1990) is being "messed up" due to overlaps across different schools (Mintzberg and Lampel, 1999). Researchers are consciously integrating different process schools and are building linkages across in order to make sense of the reality of the organizations around them. As a result, a number of newer models have emerged. For example, in their study of the regional Bell operating companies' diversification to the cellular phone industry, Noda and Collis (2001) propose a model of evolution of intra-industry firm heterogeneity based on a firm's initial experience in its local market, divergent forces such as local learning, and positive feedback, and convergence forces such as global learning. Likewise, varying combinations of learning, knowledge, capabilities, power and institutionalization (e.g. Fox, 2000; Kellogg, Orlikowski, and Yates, 2006; Lawrence, Mauws, Dyck, and Kleysen, 2003) are evolving, which have the potential for a more integrated, fine-grain analysis. In their several studies, Vaara, and colleagues investigate the dynamics of legitimation, and delegitimation related to strategic, and structural changes using the recursive perspective of discourse, and action (e.g. Vaara and Monin, 2010; Vaara and Tienari, 2011; Erkama and Vaara, 2010).

Marcus, and Geffen (1998) propose that passing of Clean Air Act 1990 in the U.S.—the role of the government for institutional change was teleological, and competing electric utilities in the market was evolutionary. Using a dialectical lens, they posit the former as thesis and the latter as antithesis, and integrate them to bring a synthesis. The authors' focus is on competency acquisition by electric utilities to manage their physical environment for pollution control. The utilities essentially used the solutions brought to them by their technology suppliers. These authors seem to blend various perspectives such as the guided evolution, the learning and competencies, the institutional, and the dialectical perspectives. Likewise, Fudge (2010) uses the teleological,

evolutionary, and dialectical motors to understand the mechanisms involved in the termination of a telecommunications companies' strategic alliance in Canada.

Further, a number of studies on sustainability use the political ecology approach (e.g. Brogden, and Greenberg, 2003; Dove, 2003; Paulson, Gezon, and Watts, 2003) that brings together ideas from ecology, power, and politics, as well as complexity, and emergence. Others propose a community-based approach (e.g. Natcher and Hickey, 2002). In other words, the boundaries of management models are blurring resulting into further extension across levels of analysis. Mintzberg, and Lampel (1999) use the analogy of an old tree where branches get tangled over time rather than the extinction of the species as would be expected in biological evolution.

It is worth noting that researchers are making attempts to develop multilevel theories and models of organizational phenomena. For example, Bettis and Prahalad (1995), while extending their previous work on dominant logic, theorize dominant logic as an emergent property of complex systems seeking to adapt. Integrating the concept of dominant logic with learning, unlearning, and evolutionary dynamics, they argue that the dominant logic may, in turn, influence the subsequent movements in the organizational landscape as well as industrial equilibrium or dis-equilibrium.

Aldrich and Ruef (2004) develop the process of variation-selection-retention-struggle, an evolutionary theory as "an overarching framework with a set of concatenated principles. Applied across multiple levels of analysis, it is open to multiple approaches for explaining particular kinds of changes" (p. 72). They, specifically, recognize six approaches, namely, ecological, institutional, interpretive, organizational learning, resource dependence, and transaction cost economics, to draw upon to construct evolutionary explanations. They also discuss how each approach conceptualizes the process of variation-selection-retention-struggle-transformation and has implications for the evolutionary paradigm.

It is clear from the above that the models that we have presented here have the potential of further integration. Therefore, following Aldrich and Ruef (2004), we argue that they could be variously combined into an overarching framework. However, this framework may go beyond evolutionary ideas. It is important to keep in mind that we are not looking for a hegemonic model, but a plurality of approaches that may be available to support the researchers' as well as practitioners' minds in the future.

The variance of strategic process models pointed out above by Garud and Van de Ven (2001) is expected to provide requisite variety according to Ashby's law (Weick, 1979). so researchers can enrich their conceptual repertoire to guide

future research and generate interesting theoretical insights on strategic processes for sustainability. These models have contributed to a more clear understanding of organizational realities for researchers as well as students of management. A future integration of the models derived in this study in the future may help researchers examine complex strategic processes in particular settings of sustainability in organizations and can guide further research. The expectation is not that the future will be a duplication of the past, but a more sophisticated conceptualization may help researchers and practitioners make sense of the future leading to rigorous theory and thoughtful practice on sustainability in organizations.

We hope, this chapter will help sustainability researchers to see the bigger picture and better appreciate the dilemmas of using different models, which can integrate multiple, even conflicting perspectives to deal with the 'wicked' problems that theorists as well as practitioners face. As Mintzberg and Lampel (1999) assert, "We must give more attention to the entire elephant …. We may not see it fully, but we will see it better" (p. 29).

5. Conclusion

The objective of this chapter is to explore the integrative role of strategic management for sustainability through strategic process models. A survey of strategic process research provides five broad overlapping, but distinct models that have the potential for use in the future: Guided evolution, learning and competencies, institutional and structuration, complexity theory, and critical and postmodern models. As sustainability researchers better understand these models, they are likely to generate potentially useful theory and empirical research. Our analysis reveals that strategic process researchers in general are in the fore-front of integrating academic-oriented perspectives and practitioner-oriented perspectives (Austin and Bartunek, 2003). For example, in addition to the teleological, life-cycle, and evolutionary motors, strategic process researchers are using motors such as participation, self-reflection, dialectical, and narrative as well. In particular, cognitive, evolutionary, dialectical, and narrative motors are often being used with other mechanisms in the analysis of strategic processes, which may be emulated in sustainability research in organizations. Furthermore, extending the notion of action research as a practice-oriented motor mostly used in organizational development (Austin and Bartunek, 2003), there may be support for using networking as a motor for strategic processes for sustainability. Networks and alliances have been the dominant theme in strategy research in the 1990s. However, they have mainly been thought so far in terms of content rather than process.

Finally, this paper may help sustainability researchers realize the big picture so they can consciously combine explanations from several models rather than act as "six blind men of Indostan" focusing on the parts and missing the beast. Also, it is useful in arriving at the five alternative archetypes in answering the important question of how and which strategic processes combine *in practice*, which can be further blended into various models in the future.

Further work extending it to other studies in various settings and international locations would strengthen the findings of this effort. Management researchers are increasingly appreciating the diversity of international settings in terms of economies, cultures, societies, and organizations. Future attempts to include studies from Scandanavia, Eastern Europe, Asia, Africa, South America, and other settings are likely to provide further dividends to development of better theory at home and abroad.

To conclude, we explore the role of strategic management for sustainability through strategic process models used in qualitative approach. The five broad overlapping but distinct models proposed in this study document how various factors such as economic-rational, behavioral, cognitive, social, cultural, political, technological, and other influences work thorough various processes to induce pressures for and against change in diverse ways in varied settings. These models of strategic processes are likely to enrich the horizons of sustainability research for building actionable knowledge and knowledgeable practice in the future.

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