Strategic Thinking: Can it be Taught?

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In the wake of the generally accepted demise of traditional strategic planning approaches, strategic thinking has been heralded as the panacea to much of what has been seen as wrong with previous work in the strategy field. Scant attention has been paid in the literature, however, to describing specifically what the process of strategic thinking entails, the means through which it produces the benefits it is seen as creating, or how it can be incorporated into current planning practices.

This article seeks to address these important issues by arguing that strategic thinking includes five elements: it incorporates a systems perspective, it is intent-focused, involves thinking in time, is hypothesis-driven, and is intelligently opportunistic. Taken together, these elements are capable of creating superior value, in hard to initiate ways, that make organizations more adaptable to change. In order to incorporate strategic thinking into planning processes, however, we must recognize three discrete aspects of the process: repertoire-building, managing the strategic issues agenda, and programming.

BASHING TRADITIONAL APPROACHES TO STRATEGIC planning has become the favoured past-time of leading business authors on both sides of the Atlantic. The litany of indictments against the types of planning processes in place at most large multinational firms is long, and often difficult to disagree with. Traditional processes have choked initiative and favoured incremental over substantive change. They have emphasized analytics and extrapolation rather than creativity and invention. They have denied those closest to the customer a voice in the process. They have lulled us into complacency with their comforting illusion of certainty in what is in reality a hopelessly uncertain world.

Yet, as we consign several decades of writing on the subject of strategy to the dustbin—what have we got to take its place? Strategic *thinking*, we are told. And the critics of strategic planning are as confident of the *promise* of strategic thinking as they have been of the *pitfalls* of strategic planning. What remains less clear is what the concept of strategic thinking actually looks like in practice, and how we get from where we are today to where we need to be. Without achieving the kind of detailed understanding of strategic thinking that we have today of strategic planning, we risk introducing yet another appealing concept to the strategy lexicon that has little relevance to practising managers.

This article attempts to address this concern, and argues that the essential elements of strategic thinking can be captured in five discrete, but inter-related, elements. Taken together, these elements are capable of producing significant positive outcomes for organizations. Yet, it is important to note at the outset that it is *individuals* who think strategically, not organizations. In order to think strategically, however, individuals require a supporting context. Organizations need to provide that context, and to manage the strategic conversations that occur within it. Strategy planning systems can play an important role in this process.

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The Rise of Strategic Thinking

The term "strategic thinking" is often used so widely and generically today within the field of strategy that it risks becoming almost meaningless. Rarely do those who use the term define it. Most often, it appears that the term "strategic thinking" is used to denote all thinking *about strategy*, rather than to denote a particular mode of thinking, with specific characteristics. Within this broad usage, authors have used the term almost interchangeably with other concepts such as strategic planning or strategic management. Ian Wilson,[1] for example, in describing the evolution of strategic planning processes, observes:

> "The need for strategic thinking has never been greater... This continuing improvement (in strategic planning) has profoundly changed the character of strategic planning so that it is now more appropriate to refer to it as *strategic management* or *strategic thinking*."

Those who have devoted attention to defining the term "strategic thinking" have often used broad, seemingly all-inclusive definitions, such as the one offered below by Nasi:[2]

> "Strategic thinking extends both to the formulation and execution of strategies by business leaders and to the strategic performance of the total enterprise. It includes strategic analysis, strategic planning, organization and control and even strategic leadership. Therefore, strategic thinking basically covers all those attributes which can be labeled "strategic".

Though these broad uses of the term may be pervasive, they are not consistent with the sense in which early proponents of the concept of strategic thinking use the term. For Henry Mintzberg,[3] recognized as one of the foremost advocates of strategic thinking, the term is not merely alternative nomenclature for everything falling under the umbrella of strategic management; rather, it is a particular *way* of thinking, with specific characteristics. Mintzberg has devoted much of his attention to articulating the difference between strategic thinking and strategic planning. Strategic planning, he argues, is an analytical process aimed at programming already identified strategies. Its outcome is a plan. Strategic thinking, on the other hand, is a synthesizing process, utilizing intuition and creativity, whose outcome is "an integrated perspective of the enterprise." Rather than occurring hand-in-hand, traditional planning processes tend to drive out strategic thinking, Mintzberg argues, and as a result, impair rather than support successful organizational adaptation.

C. K. Prahalad and Gary Hamel,[4] two other highly influential strategy theorists, join Mintzberg in his indictment of traditional approaches to planning which they describe as "strategy as form filling". Though they use the term, "crafting strategic architecture" rather than "strategic thinking", the same themes of creativity, exploration, and understanding discontinuities are prevalent as elements of the approach to strategy-making that they advocate.

Ralph Stacey,[5] approaching strategy through a different lens—that of the discoveries of the "new science" of quantum physics and complexity theory—reaches much the same conclusions as the authors already cited. Though he is sceptical of according a major role to future vision as a driver of strategy, he sees strategy-making processes as successful when they are based on "designing actions on the basis of new learning", rather than following "pre-programmed rules". Strategic thinking, he asserts, is not "an intellectual exercise in exploring what is likely to happen ... strategic thinking is using analogies and qualitative similarities to develop creative new ideas".

This dichotomy between the analytic and creative aspects of strategy-making constitutes a pervasive theme in more detailed treatments on the subject of strategic thinking as well. Raimond[6] divides strategic thinking into two modes, "strategy as intelligent machine" (a data-driven, information processing approach) and "strategy as creative imagination". Nasi[7] differentiates between the "hard line" analytical approach, with its traditional focus on competition, and the "soft line" approach emphasizing values and culture.

These more specific discussions, taken together, still leave the practising strategist interested in translating the concept of strategic thinking into actual business practice with several challenges. First, this literature focuses more on what strategic thinking is *not*, than on what it is. Though this is helpful in distinguishing strategic thinking from other concepts within the strategy field, it stops far short of the kind of careful delineation of the characteristics of strategic thinking needed to facilitate its implementation by managers and its development by educators. Second, the literature draws a sharp dichotomy between the creative and analytic aspects of strategy-making, when both are clearly needed in any thoughtful strategy-making process. Finally, the literature leaves one with a strong sense that strategic thinking is clearly incompatible with strategic planning as we know it. Yet, we know that putting processes in place to ensure that managers attend to strategic issues, amidst the day-to-day crises that so capture their focus, is essential. Thus, we cannot merely abandon all attention to the process of strategy formulation—we need to know how to transform today's planning process in a way that incorporates, rather than undermines, strategic thinking.

This article attempts to address each of these issues by outlining what I believe to be the elements of strategic thinking and then relating these elements to alternative views of strategic planning processes which support, rather than impede, strategic thinking.

A Model of the Elements of Strategic Thinking

Following the views of Mintzberg, I define strategic thinking as a particular *way* of thinking, with specific attributes. Figure 1 contains a model of the elements that I believe comprise strategic thinking.

The model includes five elements, each of which I will address in turn.

A Systems Perspective

Strategic thinking is built on the foundation of a systems perspective. A strategic thinker has a mental model of the complete end-to-end system of value creation, and understands the interdependencies within it. Peter Senge, in his work on learning organizations, has described the power of mental models in influencing our behavior:

> "New insights fail to get put into practice because they conflict with deeply held internal images of how the world works, images that limit us to familiar ways of thinking and acting. That is why the discipline of managing mental models—surfacing, testing, and improving our internal pictures of how the world works—promises to be a major breakthrough ..."[8]

This mental model of "how the world works" must incorporate an understanding of both the external and internal context of the organization. The dimension of the external context that has dominated strategy for many years has been industry-based. New writers in the field of strategy, James Moore among them, have argued that a perspective beyond that of industry is fundamental to the ability to innovate:

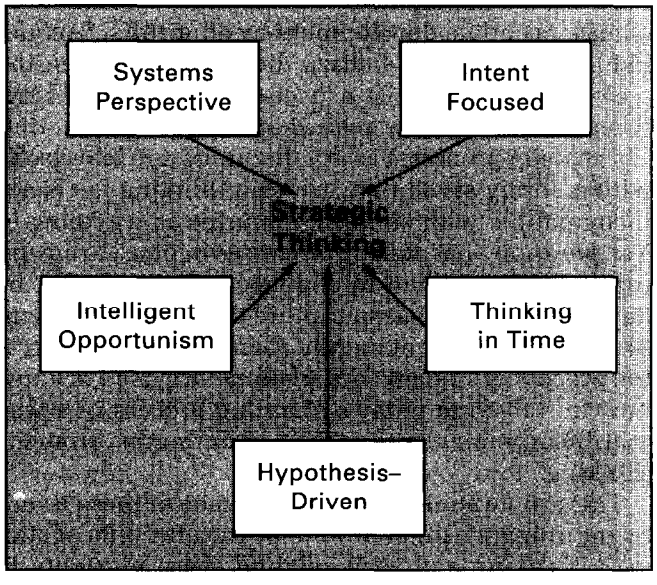

Figure 1. The elements of strategic thinking.

> "I suggest that a company be viewed not as a member of a single industry but as part of a *business ecosystem* that crosses a variety of industries. In a business ecosystem, companies co-evolve capabilities around a new innovation: they work co-operatively and competitively to support new products, satisfy customer needs, and eventually incorporate the next round of innovations."[9]

Thus, the ability to manage in these converging arenas requires that we think strategically about which of these competing networks of suppliers we join and how we position ourselves within this ecosystem.

In addition to understanding the external business ecosystem in which the firm operates, strategic thinkers must also appreciate the inter-relationships among the internal pieces that, taken together, comprise the whole. Such a perspective locates, for each individual, his or her role within that larger system and clarifies for them the effects of their behavior on other parts of the system, as well as on its final outcome. We have talked much about the importance of fit between the corporate, business, and functional levels of strategy. Fit with the fourth level—the personal—may be the most critical of all. It is impossible to optimize the outcome of the system for the end customer, without such understanding. The potential for damage wrought by well-intentioned but parochial managers optimizing their part of the system at the expense of the whole is substantial.

Thus, the strategic thinker sees vertical linkages within the system from multiple perspectives. He or she sees the relationship between corporate, business level, and functional strategies to each other, to the external context, and to the personal choices he or she makes on a daily basis. In addition, on a horizontal basis, he or she sees the connection across departments and functions, and between communities of suppliers and buyers.

Intent-focused

Strategic thinking is intent-driven. Hamel and Prahalad have repeated this point for nearly ten years and have revolutionized our thinking about strategy in the process:

> "Strategic intent is our term for such an animating dream ... It also implies a particular point of view about the long-term market or competitive position that a firm hopes to build over the coming decade or so. Hence, it conveys a *sense of direction*. A strategic intent is differentiated; it implies a competitively unique point of view about the future. It holds out to employees the promise of exploring new competitive territory. Hence, it conveys a *sense of discovery*. Strategic intent has an emotional edge to it; it is a goal that employees perceive as inherently worthwhile. Hence, it implies a *sense of destiny*. Direction, discovery, and destiny. These are the attributes of strategic intent." (pp.129–130)[10]

Evidence for the power of a clear intent comes from the world of social psychology, as well. Writing about how individuals attain the state of effortless outstanding performance that he calls "flow",

Csikszentmihalyi draws our attention to what he calls the primacy of "psychic energy".[11] We can focus attention, he argues, "like a beam of energy" or diffuse it in "desultory random movements ... we create ourselves by how we invest this energy."

Strategic intent provides the focus that allows individuals within an organization to marshal and leverage their energy, to focus attention, to resist distraction, and to concentrate for as long as it takes to achieve a goal. In the disorienting swirl of change, such psychic energy may well be the most scarce resource an organization has, and only those who utilize it most efficiently will succeed.

Thus, strategic thinking inevitably is fundamentally concerned with, and driven by, the shaping and re-shaping of intent.

Intelligent Opportunism

Within this intent-driven focus, there must be room for intelligent opportunism that not only furthers intended strategy but that also leave open the possibility of new strategies emerging. In writing about the role of "strategic dissonance" in the strategy-making process at Intel, Robert Burgelman has highlighted the dilemma involved in using a well-articulated strategy to channel organizational efforts effectively and efficiently, against the risks of losing sight of alternative strategies better suited to a changing environment. This requires that an organization be capable of practising "intelligent opportunism" at lower levels. He concludes:

> "One important manifestation of corporate capability is a company's ability to adapt without having to rely on extraordinary top management foresight." (p. 208)[12]

The opponents of intention-based planning systems, Ralph Stacey most prominent among them, argues that our definition of intention must be broad and flexible:

> "Instead of intention to secure something relatively known and fixed, it becomes intention to discover what, why, and how to achieve. Such intention arises not from what managers foresee but from what they have experienced and now understand ... The dynamic systems perspective thus leads managers to think in terms, not of the prior intention represented by objectives and visions, but of continuously developing agendas of issues, aspirations, challenges, and individual intentions." (p. 146)[13]

Thinking in Time

As Stacey notes, strategy is not driven by future intent alone. Hamel and Prahalad agree, and argue that it is the *gap* between today's reality and that intent for the future that is critical:

> "Strategic intent implies a sizeable stretch for an organization. Current capabilities and resources will not suffice. This forces the organization to be more inventive, to make the most of limited resources. Whereas the traditional view of strategy focuses on the degree of fit between existing resources and current opportunities, strategic intent creates an extreme misfit between resources and ambitions." (p. 67)[14]

Strategic thinking, then, is always "thinking in time" to borrow a phrase from historians Richard Neustadt and Ernest May. Strategic thinking connects past, present, and future. As Neustadt and May argue:

> "Thinking in time (has) three components. One is recognition that the future has no place to come from but the past, hence the past has predictive value. Another element is recognition that what matters for the future in the present is departures from the past, alterations, changes, which prospectively or actually divert familiar flows from accustomed channels ... A third component is continuous comparison, an almost constant oscillation from the present to future to past and back, heedful of prospective change, concerned to expedite, limit, guide, counter, or accept it as the fruits of such comparison suggest." (p. 251)[15]

Thinking in time, in this view, uses both an institution's memory and its broad historical context to think well about creating its future. This requires a capability both for choosing and using appropriate analogies from its own and other's histories, and for recognizing patterns in these events.

This oscillation between the past, present, and future is essential for the execution of strategy as well as its formulation. Charles Handy has described the "rudderlessness"[16] that can result when we disconnect from our past. He argues that we need both a sense of continuity with our past *and* a sense of direction for our future to maintain a feeling of control in the midst of change. Thus, the strategic question is not only "what does the future that we want to create look like?". It is "having seen the future that we want to create, what must we keep from our past, lose from that past, and create in our present, to get there?"

Hypothesis-driven

The final element of strategic thinking recognizes it as an hypothesis-driven process. It mirrors the "scientific method", in that it deals with hypothesis generating and testing as central activities.

Being hypothesis-driven is more foreign to business managers than are the other elements of strategic thinking discussed thus far. Yet, in an environment of ever-increasing information availability and decreasing time to think, the ability to develop good hypotheses and to test them efficiently is critical. It is my personal belief that their ability to work well with hypotheses is the core competence of the best strategy consulting firms. As a visiting consultant explained to our MBA students:

> "... That's what we're good at—developing good hypotheses about a business situation. When you do a business case, you don't have to be hypothesis-driven, because you've got five or ten pages of data and anybody can process that much in a relatively limited period of time. We have all the data in the world, and it's really hard to get and so we need to make some judgements about what we think is going to be important and what's not... Our challenge is to say which questions to start with and ... figure how to collect the data."

Because it is hypothesis-driven, strategic thinking avoids the analytic—intuitive dichotomy that has

characterized much of the debate on the value of formal planning. Strategic thinking is *both* creative and critical, in nature. Figuring out how to accomplish both types of thinking simultaneously has long troubled cognitive psychologists, since it is necessary to *suspend* critical judgement in order to think more creatively.[17]

The scientific method accommodates both creative and analytical thinking sequentially in its use of iterative cycles of hypothesis generating and testing. Hypothesis generation asks the creative question—what if...?" Hypothesis testing follows with the critical question "If..., then...?" and brings relevant data to bear on the analysis, including an analysis of a hypothetical set of financial flows associated with the idea. Taken together, and repeated over time, this sequence allows us to pose ever-improving hypotheses, without forfeiting the ability to explore new ideas. Such experimentation allows an organization to move beyond simplistic notions of cause and effect to provide on-going learning.

Taken together, these five elements describe a strategic thinker with a broad field of view that sees the whole and the connections between its pieces, both across the four vertical levels of strategy and across the horizontal elements of the end-to-end value system. This view includes a sense of the future that drives us, including a sense of both where that future connects and disconnects with the past and demands anew in the present. The process toward which we move into that future is an experimental one, that makes use of our best creative thinking to design options, and our best critical thinking to test them. Finally, the strategic thinker remains ever open to emerging opportunities, both in service to the defined intent and also in question as to the continuing appropriateness of that intent.

The Outcomes of Strategic Thinking

Firms who succeed at embedding a capability for strategic thinking throughout their organizations will have created a powerful new source of competitive advantage. Their whole system perspective should allow them to redesign their processes for greater efficiency and effectiveness. Their intent-focus will make them more determined and less distracted than their rivals. Their ability to think in time will improve the quality of their decision-making and the speed of implementation. A capacity for hypothesis generation and testing will incorporate both creative and critical thinking into their processes. Intelligent opportunism will make them more responsive to local opportunities. Taken together, these elements create a capacity for strategic thinking that meets the three fundamental tests for a strategically valuable capability: (1) they create superior value for customers, (2) they are hard for competitors to imitate, and (3) they make the organization more adaptable to change.[18]

The Implications of Strategic Thinking for Planning Processes

Thus far, the view described here defines a strategic thinker as a *learner*, rather than a *knower*. As such, it locates strategic thinking as the outcome of a *developmental* process. In much the same way that the strategy field's growing interest in the concept of competing on capabilities has shifted our emphasis from product/market selection to selecting which set of capabilities to build and maintain; the shift from an emphasis on strategic planning to strategic thinking has similar effects. It is no longer the products alone—the plans themselves—that are dominant, it is the process that we must concern ourselves with. Thus, the planning process finds its value not only in shaping the future direction of a business, but also in developing the strategic thinking capabilities of its managers. In this vein, Mintzberg argues for the central role of the planner as the catalyst who "opens up strategic thinking". We believe that the same case can be made for the planning process itself:

> "In fact, this catalyst role sits at the edge of the other roles (external strategic analysis and scrutinization of strategies) that we have already discussed. Shift anyone of them from a focus on the *content* of the planner's output to support for the *process* of the manager's work, and you begin to enter the catalyst role. In other words, the content of the *planner's* work becomes an influence on the *manager's* process." (p. 382)[19]

How, then, can we use the planning process as catalyst for enhancing the strategic thinking capabilities, not just of senior management, but of the entire organization?

Planning as Dialogue

The most valuable role strategic planning processes play is to legitimize a developmental dialogue around strategic issues, the outcome of which is both better strategy for an organization and better developed strategic thinking capabilities in its members.

Planning processes focus managerial attention and time on issues of long-term *importance*, rather than short-term *urgency*. In doing this, they create an opportunity for on-going "strategic conversations".[20] These strategic conversations are the interactions through which strategic choices get made, tested, and the rationales behind them developed.

Participation in such conversations is the critical factor in enhancing the strategic thinking skills of any individual. Nancy Dixon has described the way in which such dialogues become developmental:

> "Dialogue has the potential to alter the meaning each individual holds and, by doing so, is capable of transforming the group, organization, and society. The relationship between the individual and the collective is reciprocal and is mediated through talk. People are both recipients of tacit assumptions and the creators of them. In this way, dialogue results in the co-creation of meaning ... the common understanding engendered by dia-

logue is one in which each individual has internalized the perspectives of the others and thus is enriched by a sense of the whole." (pp. 24–25)[21]

In order to be developmental, dialogue must involve a group of individuals with diverse perspectives that are freely shared. Studies of highly productive new product development teams have demonstrated the increases in creativity, in particular, associated with bringing individuals of differing backgrounds and abilities together.[22] The openness of such discussion is fundamental to their effectiveness, as Burgelman notes:

"An atmosphere in which strategic ideas can be freely championed and fully contested by anyone with relevant information or insight may be a key factor in developing internal selection processes that maximize the probability of generating viable organizational strategies."[23]

Thus, the dialogue around strategy must be given time on the corporate agenda, it must be inclusive, and it must be open to conflict and dissent. It must operate in both what Peter Senge has called "inquiry" vs "advocacy" mode. In inquiry mode we seek first to understand the other's perspectives, before moving on to evaluation; in advocacy mode, we debate in order to defend our own perspective. Inquiry mode is more interested in questions than answers. Advocacy mode, Senge argues, dominates decision-making in most organizations:

"Most managers are trained to be advocates. In fact, in many companies, what it means to be a competent manager is the ability to solve problems. Meanwhile inquiry skills go unrecognized and unrewarded... The most productive learning usually occurs when managers combine skills in advocacy and inquiry. Another way to say this is "reciprocal inquiry". By this we mean that everyone makes his or her thinking explicit and subject to public examination." (p. 252)[24]

From Planning to Dialogue

How can we transform today's strategic planning processes into the kinds of developmental dialogues described here? Merely inviting more participants into the discussion seems unlikely to succeed. If the current level of individual strategic thinking ability is largely inadequate, more widespread inclusion seems more likely to produce time-consuming parochial wrangling than developmental dialogue. Productive participation requires a level of strategy literacy in each of the five elements that may simply not be present in the majority of organizations today.

Getting from here to there requires that we view this dialogue-based planning process as having three discrete activities: *repertoire-building*, *managing the strategic issues agenda* and *programming strategies*. The aim of repertoire-building is to "ramp up" and keep current the strategic thinking literacy level of individuals throughout the organization. Managing the strategic issues agenda, a concept taken from Ralph Stacey's work, deals with the reality of each individual's specific strategic context. It is the stage of the planning process in which each individual chooses from among his or her repertoire of strategy concepts, frameworks, and techniques to find the one most useful for the situation at hand. Programming the strategy focuses on the traditional detailed implementation timelines that must accompany a new strategy.

Though these activities are clearly related and must all be present for good strategy-making, each must be individually attended to in the planning process. Much of the criticism of traditional planning processes has focused on their domination by analytic techniques. Yet, it is not the techniques, *per se*, that are problematic. It is the narrowness of individual techniques imposed across all contexts by uniform corporate planning systems that is at fault. Thus, current planning processes have collapsed the three activities into one muddled, and often dysfunctional, process.

Building the Repertoire

Ideas are what strategy is really about. Concepts, frameworks, techniques—all provide us with new windows that help us to escape the limitations imposed by our own inevitably narrow ways of seeing our world. If the strategic dialogue is about asking the creative question, ideas must play a central role. As James Moore has argued:

"Business communities, unlike biological communities of co-evolving organisms, are social systems. And social systems are made up of real people who make decisions; the largest patterns are maintained by a complex network of choices, which depend, at least in part, on what participants are aware of. As Gregory Bateson noted, if you change the ideas in a social system, you change the system itself." (p. 85–86)[25]

Some ideas prove to be more useful than others. It is the specific context which determines the relative usefulness of any given idea. A central role for planning processes, in a view of them as developmental dialogues, is to ensure that managers are equipped with a rich repertoire of ideas—it is *not* to make the choice of technique for them.

Strategic thinking cannot be decoupled from the use of frameworks and techniques; it must be freed from their unilateral imposition. Each of the five elements of strategic thinking is powerfully informed by the various techniques available today. Figure 2 lists a sample of the frameworks, concepts, and techniques that I believe support each element.

The development of a systems perspective, for example, is greatly aided by mapping techniques, whether they be of stakeholder groups or value chains. New value chaining approaches, aimed at seeking opportunities to alter existing value chains in fundamental ways are attracting significant attention at firms like Shell, "AT&T, and ABB.[26] The future search conference, a large group dialogue technique

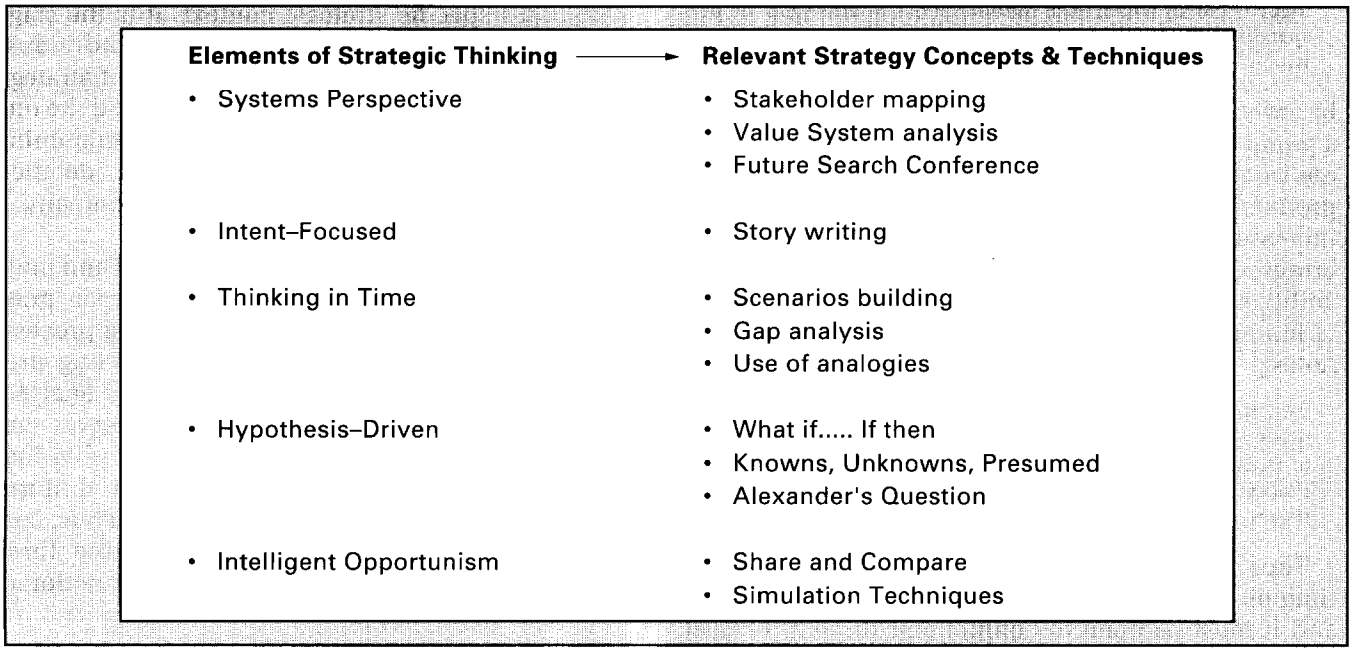

FIGURE 2. Repertoire-building.

pioneered by Emery and Trist at Tavistock, seeks to put the "whole system" in the room for a dialogue lasting several days. Participants leave with a greatly enriched sense of their role as part of the larger system. Here, too, innovative firms are experimenting with this approach as a way to make planning processes more inclusive, with the goal of reducing the time required by traditional "cascade" approaches to strategic change.

Motorola, for instance, gathered 25 key personnel within one of its divisions from around the world to meet in Tokyo for three days with the goal of "creating a future toward which they could all work".[27] Working together, they began the process by analysing both the larger global environment and industry trends. Next, they traced the history of the business unit and, in combination with their environmental assessment, created a shared sense of what they needed to keep and to lose from their past, and invent for their future. They created an outline of a desirable future, identified constraints, and how to overcome them. They concluded the event with the creation of a set of task forces, each armed with an action plan for implementation.

Hewlett-Packard's manufacturing facility in Greeley, Colorado, U.S.A. used a similar participative approach, bringing together all plant manufacturing managers and a cross-section of line workers to establish a set of long-term initiatives for the facility.

In my own experience, working with managers in executive education settings, the very simple exercise of story writing has proven to be a powerful way of helping managers develop a strategic intent for their own business. My approach is to ask a group of managers to write two cover stories for a leading business magazine five years hence, in which they tell the story of where they are and how they got there. One story is entitled "Renaissance at Company X," the other, "The Dark Ages at Company X". I am always astounded and inspired by the creativity and clarity of their efforts.

The thinking in time element benefits from the commonly used technique of scenario building. Here, again, the focus is not on the final scenarios themselves, but the creative thinking process that creates it. As Schoemaker notes:

> "Good scenarios challenge tunnel vision by instilling a deeper appreciation for the myriad factors that shape the future. Scenario planning requires intellectual courage to reveal evidence that does not fit our current conceptual maps... What may initially be bleak scenarios could, in fact, hold the seeds of new business and unrecognized opportunity. But those opportunities can be perceived only if you actively look for them... In addition to perceiving richer options, however, we must also have the courage and vision to act on them. As F. Scott Fitzgerald noted, 'The test of a first-rate intelligence is the ability to hold two conflicting ideas in mind at the same time, and still retain the ability to function.'" (p. 40)[28]

The use of scenario planning-type techniques helped

Los Alamos National Laboratories—the New Mexico birthplace of the atomic bomb— think creatively about their future in a post-cold war world.[29] Over 150 Los Alamos scientists and staff participated in the process. They began by forming teams that researched a variety of trends, opportunities, and contexts as a prelude to developing a set of five scenarios or "alternative futures" for the lab. This was followed by a series of workshops, involving all levels, in which the pros and cons of each scenario were explored. Based on these discussions, the group created a consensus view of what Los Alamos should become over the next decade.

The use of gap or force field analysis can be very helpful for thinking in time, as can the use of analogies, as well. The case method, long used by business schools, is really just a dialogue method based on the use of analogies. I find carefully selected cases from outside a company's own industry can be the most effective catalyst of a rich repertoire-building discussion.

For hypothesis generation, practice with the "what if anything were possible question?" question is a good place to start. For hypothesis testing, Neustadt and May offer several techniques that I have found valuable. One is to divide the available data into three categories—what is known, what is unknown, and what is presumed. The critical issues here are testing the validity of what is important that we *presume* and deciding what is unknown but *knowable*. Here, they impose "Alexander's Question": "What new knowledge would change a presumption?"

Intelligent opportunism, I suspect, may be the most difficult element to build a repertoire around. At best, it emanates from an individual's natural curiosity and creativity. This can be enhanced by best practice "share and compare" sessions among managers in closely related businesses. Simulation techniques also have the potential to develop both more intelligently opportunistic and hypothesis-driven mindsets by allowing managers to practice these skills in virtual worlds where they are protected from the downside consequences of intellectual risk-taking. USAA, a highly regarded financial services firm known for its innovative use of information technology, created a simulation game tailored to the dynamics of its insurance business. The simulation is the centrepiece of an extensive development program in which all 1300 of the firm's management level staff will eventually participate.

Intelligent opportunism, in practice, requires confidence, as well as creativity. A process that builds that quality into a manager's repertoire is equally essential. Finally, those organizations which seek to establish a world-class capability for innovative thinking at all levels may need to provide resource slack in their systems. Such slack allows managers the time to think creatively and proactively about their businesses. 3M's fabled mandate that scientists be allocated a portion of their time to pursue new projects of personal interest operationalizes this principle.

There remains another essential skillset that must be incorporated into each individual's repertoire, beyond those of strategy literacy. These are the process skills that allow us to translate our individual strategic thinking skills into a dialogue with a larger community. A group of individual strategic thinkers who cannot come together to create a consistent, coherent intent at the institutional level are as likely to dissipate and waste organizational resources as they are to leverage them. The skills of listening and inquiry that Senge speaks of, and the awareness of group dynamics that Stacey stresses, are critical. This ability to have a productive conversation is distinct from, and must complement, well-developed individual strategic thinking skills.

As we begin to take seriously this view of repertoire-building as an essential part of the planning process, we may find the need to reconsider the traditional differentiation between management development and strategy formulation processes. Much of what goes on in the single company executive programs so popular today in major business schools is as much about making strategy as it is about individual development. Thus, it is not surprising that a number of the major strategy consulting firms in the U.S.A., like Monitor, have expanded their own repertoire to include offering executive education.

Managing the Strategic Issues Agenda

If repertoire-building is about getting managers *ready* to "do strategy", strategic issues management is what the "doing" is all about. Here, I use Ralph Stacey's[30] differentiation between the activity of managing the strategic issues agenda and traditional planning. The planning process, in Stacey's view, exists to facilitate the management of strategic issues—not to control or oversee them.

In an ideal world, strategic thinking individuals, armed with a diverse toolkit of concepts, frameworks, and techniques and sharing a common language and literacy, would appear on the doorsteps of the firm, sprung fully formed like Venus from the sea, ready to take over the management of the strategic issues they faced. Each would select from the toolkit those concepts best suited to their own contexts. In reality, the two activities—developing individuals' strategy repertoires and managing strategic issues—occur simultaneously. They shape and inform each other. We are learning in real-time, as we go along.

Planning as a Democratic Process

The process utilized by Electronic Data Systems (EDS), a major information technology firm, mirrors the multi-faceted approach to strategy-making that we

have advocated here. The process began with repertoire-building, as 150 managers travelled to Dallas, Texas, in groups of 30, to learn more about what Hamel and Prahalad describe as "the intellectual tools needed to think about the future".[31] Upon completion, each group was assigned a "discovery assignment" to explore an important strategic issue, the output of which was discussed and debated by the larger group. By the conclusion of the process, over 2000 EDS employees had participated in the creation of a new strategy for the firm.

The multiple outcomes—both individual and organizational—available through broadly inclusive planning processes are potentially significant. Though these processes may appear more time intensive in the formulation stage than traditional approaches, the commitment to implementation that such involvement creates may offer substantial time saving later on, and increases the likelihood of success, as well.

A review of the experiences of the New York Botanical Gardens, midway through the implementation of a strategic plan completed in 1993, demonstrates the value of such inclusion. The New York Botanical Gardens, established in 1891 and modelled after London's Kew Gardens, is one of the largest botanical gardens in the world, with both scientific and public use missions. In the early 1990s, under the leadership of a new President, the Gardens embarked on an extensive, highly participatory planning process, aimed at recapturing the Garden's pre-eminence. Input from all employees, at every level, was solicited during the two year process. Central to the process was the formation of the planning team, numbering about 85, which included all managers with program responsibility. Often ignored areas, like security and food service, were included. Each manager, beginning with those at the front-line, was asked to give a presentation to the planning group about their role at the Gardens, their aspirations for their area, and the resources that it would take to achieve these aspirations. Next, the division heads to whom these managers reported presented, synthesizing the earlier presentations, prioritizing, and presenting their recommendations. The vice-presidents followed, in the same manner. Each presentation was followed by a Q&A involving the group at large. In the final step, the President, working with participating board members, synthesized and prioritized across all areas, and presented a proposed plan for the planning group's discussion. There was little disagreement. The final priorities, the President explained, just "fell out" of the previous discussions: "there was nearly complete consensus among all members of the planning group".

The resulting plan was ambitious and comprehensive—consisting of an integrated plan that incorporated programming, a facilities master plan, and a detailed financial plan. Taken together, realizing the aspirations the plan contained necessitated a 165 million dollar fundraising effort, three times larger than anything the Gardens had previously attempted.

Midway through the implementation process the results are impressive. Over 140 million dollars has been raised. The Garden's Conservatory, closed for renovation for four years, is slated to re-open next month. Major new facilities for plant propagation and visitor services have already opened. The scientific program is growing and new program initiatives, like a Children's Garden, are well underway.

Did the planning approach used make a difference? Employees at every level believe it did. One front-line manager explained:

> "All of the good things that have happened here might have come out of a process where senior managers got together and made all of the decision, but I don't think so. Even if they did, and even if the Gardens looked the same, it would feel a lot different. The ownership we feel—the investment that we all have in making the plan happen—that wouldn't be here. Neither would the patience that I've developed in waiting for the things that my area has been promised in the plan. I can look over at the Grounds Department and see that they've gotten their new lawn mowers that the plan promised in 1995. So I can trust that I'll get the things that the plan promised me in 1998."

Senior management, on the other hand, talked about the energy that the inclusive process created that sustained the on-going implementation of the plan, the increased understanding of the business issues the Garden faced that participation in the process generated, and the decrease in "turf protection" that resulted. The President described the rationale for his belief in inclusive planning processes:

> "We created the process based on the belief that the people in middle management know more about their work than we do. We respect their experiences and their opinions. We, as senior managers, had to filter it and integrate it and add our own ideas about priorities, but I believe that people have to be included... You need consensus—otherwise, a year or two later people are shooting down the pieces that they didn't like in the first place... If you don't do it up-front, you are doing it constantly, and I find that really draining."

Conclusions

If all of this talk about strategic thinking is to be taken seriously, it has significant implications for the design of planning processes in today's organizations. This article argues for a view of the planning process as a catalyst of a developmental dialogue, broadly inclusive of an organization's managers and open to their views. It is a process with three components—repertoire-building, strategic issues management, and programming, each of which requires careful thought. The quality of the dialogue depends upon the richness of each individual's repertoire, as well as their capacity to converse with each other. The impli-

cations of such a view challenges us to rethink many aspects of traditional planning processes. In the search for new approaches to enhance the strategic thinking skills of individuals and, in the process, the strategy-making capability of the organizations they inhabit, we must be willing to re-examine our fundamental notions of what strategy-making is all about.

References

1. I. Wilson, Strategic Planning Isn't Dead—It Changed, *Long Range Planning* **27**(4), 14 (1994).
2. J. Nasi (Ed.), *Arenas of Strategic Thinking*, Foundation for Economic Education, Helsinki, Finland p. 29 (1991).
3. H. Mintzberg, *The Rise and Fall of Strategic Planning*, The Free Press, New York (1994).
4. G. Hamel and C. K. Prahalad, *Competing for the Future*, Harvard School Press, Boston (1994).
5. R. Stacey, *Managing the Unknowable*, Jossey-Bass, San Francisco (1992).
6. P. Raimond, Two Styles of Foresight, *Long Range Planning* April, 208–214 (1996).
7. J. Nasi, op. cit.
8. P. Senge, Mental Models, *Planning Review*, **44**(March/April), 4–10 (1992).
9. J. Moore, Predators and Prey: A New Ecology of Competition, *Harvard Business Review*, May/June, 76 (1993).
10. G. Hamel and C. K. Prahalad, op. cit.
11. M. Csikszentmihalyi, *Flow*, Harper & Row, New York (1990).
12. R. Burgelman, Intraorganizational Ecology of Strategy Making and Organizational Adaptation, *Organizational Science* **2**(3), 239–262 (1991).
13. Stacey, op. cit.
14. G. Hamel and C. K. Prahalad, Strategic Intent, *Harvard Business Review* May/June, 63–78 (1989).
15. R. Neustadt and E. May, *Thinking in Time: The Uses of History for Decision-Makers*, Free Press, New York, p. 251 (1986).
16. C. Handy, *The Age of Paradox*, Harvard Business School Press, Boston (1994).
17. R. Paul, Dialogical Thinking: Critical Thought Essential to the Acquisition of Rational Knowledge and Passions, In J. B. Baron and R. J. Sternberg, (eds), *Teaching Thinking Skills: Theory and Practice*, Freeman and Company, New York (1987).
18. G. Day, The Capabilities of Market-Driven Organizations, *The Journal of Marketing* October, 37–52 (1994).
19. Mintzberg, op. cit.
20. J. Liedtka and J. Rosenblum, Shaping Conversations: Making Strategy, Managing Change, *California Management Review* Fall, (1996); F. Westley, Middle Managers and Strategy: The Microdynamics of Inclusion, *Strategic Management Journal*, **11**, 337–351 (1990).
21. N. Dixon, *Perspectives on Dialogue: Making Talk Developmental for Individuals and Organizations*, Center for Creative Leadership, Greensboro, NC (1996).
22. D. Leonard-Barton, *Wellsprings of Knowledge*, Harvard Business School Press, Boston (1995).
23. Burgelman, op. cit.
24. P. Senge, op. cit.
25. J. Moore, op. cit.
26. J. Moore, op. cit.
27. S. Cabana, Motorola, Strategic Planning, and the Search Conference, *Journal for Quality and Participation* July/August, 22–31 (1995); S. Cabana, F. Emery, and M. Emery, The Search for Effective Strategic Planning is Over, *Journal for Quality and Participation* July/August, 10–19 (1995).
28. P. Schoemaker, Scenario Planning: A Tool for Strategic Thinking, *Sloan Management Review*, Winter, 25–40 (1995).
29. M. Leuchter, A Quantum Change at Los Alamos, *Journal of Business Strategy* Jan/Feb, 16–21 (1997).
30. R. Stacey, op. cit.
31. Hamel and Prahalad, op. cit.

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