

Corporate Strategy: From Core Competence to Complexity--An Evolutionary Review – Part I

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1.1 The Origins of Corporate Strategy

As Richard Rumelt indicates in his book, “Fundamental Issues in Strategy: A Research Agenda”,¹ corporate strategy is a relatively recent discipline. While pioneers in the field like B.H. Liddell Hart² and Bruce Henderson³ (later to found the Boston Consulting Group and creator of the famous BCG Growth-Share Matrix) began their research during the Second World War, the modern field of business strategy as an academic discipline, taught in schools and colleges of business emerged rather later.⁴ Rumelt provides an interesting chronicle in the introduction to his volume by noting that historically corporate strategy, even when taught as a capstone course, was not really an organized discipline. Typically, depending on the school’s location and resources, the course would either be taught by the senior most professor in the department or by an outside lecturer from industry. The agenda tended to be very much instructor specific and idiosyncratic rather than drawing in any systematized fashion upon the subject matter of an organized discipline. Rumelt notes that the first generation of scholars to specialize in corporate strategy through dissertation research and publication emerged during the 1970’s. However, even before this first group emerged, an attempt was being made by these students’ thesis advisors to formulate the disciplinary basis of corporate strategy.

1.1.1. Corporate Strategy as the Conceptual Unifier of the Business

One of the most important early thinkers on corporate strategy was Harvard professor Kenneth T. Andrews. Perhaps his most famous work is his book “The Concept of Corporate Strategy”,⁵ which has also appeared in other places as both a brief book chapter⁶ and a rather longer audiotape lecture. Andrews primarily conceptualized corporate strategy as a unifying concept, centered around pattern.⁷ While many of his notions regarding the corporation may seem a bit dated, as they did after all, reach their final form before the majority of landmark decisions in corporation law and corporate governance which emerged out of the merger-mania of the 1980’s and far before the electronic commerce and internet revolution of the next decades, as with the work of Hart and Henderson, their foundations are nonetheless essentially sound.

Perhaps Andrews’ best known contribution to the strategy literature is his explicit recognition of the SWOT pattern of strategy analysis, although few professionals would recognize this as the part of the original Andrews methodology, so widespread has its use become. Nor was SWOT analysis central to Andrews’ definition or methodology as it has become for so many other students of corporate strategy. Andrews merely mentioned under his treatment of the corporate environment that a good corporate leader (CEO, COO, CFO and now CIO and CTO) would behave rather like a first lieutenant on patrol in a combat situation. Both the corporate officer and the military officer would be expected to scan their respective environments and to evaluate their own resources in a fashion which would indicate strengths and weaknesses (internal scan) and threats and opportunities (environmental scan). The idea of the business scan has subsequently been developed in more recent times by Arnoldo Hax and Nicholas Majluf.⁸ While Hax and Majluf have extended Andrews original concept in a technical fashion, using it to analyze organizational performance at the business unit, corporate and environmental level, few other authors have capitalized on Andrews work. Although SWOT analysis abounds in the business school literature, its

¹ [Fundamental Issues in Strategy : A Research Agenda](#) by [Richard P. Rumelt](#) (Editor), [Dan E. Schendel](#) (Editor), [David J. Teece](#) (Editor), Harvard Business School Press, (Cambridge, MA: 1996)

² See B.H. Liddell Hart, “Strategy”, Meridian Books, Second Revised Edition (London and New York: 1991).

³ For more details on Henderson and the BCG Growth-Share Matrix, see “Perspectives on Strategy from The Boston Consulting Group”, Ed. Carl Stern, John Wiley and Sons (New York: 1998)

⁴ Ghemawat and Levinthal, (2005) “Choice Structures, Business Strategy and Performance: A Generalized NK-Simulation approach”, WP 00 005, The Reginald Jones Center, The Wharton School, University of Pennsylvania, describe the format, approach and contents of early courses in business strategy at the Harvard Business School in the 1920’s, but a close reading of their argument shows that only after Andrews’ work in the 1960’s is there a well structured disciplinary approach to the subject.

⁵ Kenneth T. Andrews, “The Concept of Corporate Strategy”, Richard Irwin, Inc. (New York: 1980)

⁶ See “Readings in the Strategy Process”, Ed. Henry Mintzberg, Prentice Hall, (New Jersey: 1998) and “The Concept of Corporate Strategy (I Don’t Know What This Means)”, Careertapes Enterprises, 1991.

⁷ Ibid. No. 6, “Corporate strategy is the pattern of decisions in a company that determines and reveals its objectives, purposes or goals, produces the principal policies and plans for achieving those goals, and defines the business the company is to pursue, the kind of economic and human organization it intends to be and the nature of the economic and noneconomic contribution it intends to make to its shareholders, employees, customers and communities...”

⁸ See “The Strategy Concept and Process”, by Arnoldo Hax and Nicholas Majluf, 2nd Edition, Prentice-Hall (New Jersey: 1996).

technical applications refer primarily to marketing strategy or risk analysis of the international business environment, particularly political risk analysis. Because of its breadth, SWOT analysis as a generalized tool tends to be a trap, particularly for MBA students or casual readers of business literature because it all too easily tends to evolve into a mere shopping list of self-defining “do’s” and “don’ts” while masking the underlying conflicts and tradeoffs of genuine corporate strategy.

Andrews’ most important contribution to the literature is more likely his emphasis on “pattern” as the relational foundation of corporate activities which we call strategy. This is a far more abstract concept, as Andrews himself recognizes on his audiotape lecture.⁹ For terms of simplicity, and also for the utility of linking it with the work of Richard Rumelt, in order to construct the 3-C test (consistency, coherence and consonance), I will refer to Andrews’ use of pattern and relational structure as “coherence”. If we return to Andrews original definition of corporate strategy as a “pattern of activity” which defines the corporation’s economic (and non-economic) interests and means by which the corporations proposes to pursue these interests then what should emerge is coherent pattern. As an aside, the choice of the word “emerge” is not accidental. Henry Mintzberg, in a now famous series of articles on what he termed “Emergent Strategies”, made some very convincing arguments that for most corporations, strategy is more likely to be a pastiche of structures which emerge (like undocumented, patched operating system code) as the corporation grows, rather than a monolithic set of policy statements formulated at the birth of the corporation.¹⁰

1.2 Corporate Pattern as the Core of Corporate Strategy

Nonetheless, Andrews’ recognition of pattern as a defining variable in corporate strategy is a major contribution to the literature. Among other things, in defining strategic tradeoffs and in evaluating the strategic behavior of a business, it allows the analyst to determine how coherent that overall pattern is. Questions like, “does this corporate activity make sense within the broader context of our organizational mission?” fit very neatly into the “coherence test” and in a very real way anticipate the concepts of cross-subsidization and strategic fit among a the different activities in a corporation’s value chain which are so well expressed by Michael Porter at the end of the 1990’s.¹¹

Andrews is a great simplifier, and while his methods have become rather dated, they point to some of the fundamental ways in which we can think about strategy. Andrews began his analysis by “summary statements” of the corporation’s strategy. On the one hand, this is a useful device, very much like plotting the time-line of a business school case. On the other hand, it may miss much of the “meta-structure” or the “story of the story” – the underlying dynamics of what the corporate strategy is really all about or the variable upon which critical strategic decisions and tradeoffs may hinge. To get a feeling for some of these newer questions, all one has to do is go to the Harvard Business School publishing webpage, and type in the word strategy.¹² Here we find a whole new discipline of “strategic mapping”, arguments which suggest moving beyond the business model and complex models like “double loop management” and “continuous strategy”. In such an environment, Andrews, himself once a Harvard Business School Professor, is clearly the strategist of an earlier era. On the other hand, there is a beautiful universality in his focus on pattern, because coherent pattern must still emerge from even the most modern strategies if they are to be viable in the marketplace. Whether one achieves this all at once or incrementally, and whether it is achieved through technical processes of strategic mapping or the various processes of market research and second or third level guided planning (including long-time horizon interlocking strategic value chain activity planning) coherence must still characterize the business strategy if it is to succeed.

While Andrews draws a strong distinction between strategic planning and strategy implementation, the work of later authors like Mintzberg and Drucker¹³ demonstrates rather clearly that this is probably not the

⁹ Ibid. No. 6

¹⁰ See, Henry Mintzberg, 'The Design School: Reconsidering the Basic Premises of Strategic Management.' (Strategic Management Journal, vol. 11/3, 1990, 171-195) . For a grand summation of Mintzberg’s views, see “The Academy of Management Executive”, August 2000 v14 i3 p31, View from the top: Henry Mintzberg on strategy and management. (Interview) Daniel J. McCarthy.

¹¹ See, Michael Porter, “What is Strategy”, Harvard Business Review, November-December, 1996.

¹² <http://www.hbsp.harvard.edu>

¹³ See for example, “Beyond capitalism” an interview with management expert and author Peter Drucker, by Nathan Gardels, *New Perspectives Quarterly*, Spring 1998 v15 i2 p4(9), see also 'Flashes of genius:' Peter Drucker on entrepreneurial complacency and delusions ... and the madness of always thinking you're number one." *Inc.* (Special Issue: The State of Small Business), Interview by George Gendron, May 15, 1996 v18 n7 p30(8)

best way of viewing the strategy process. As the next section of this brief paper discusses, this was the earliest conceptual break which Richard Rumelt, Andrews' "star student" and a leader of the first generation of professional strategists made with Andrews. While Andrews explicitly argued that breaking up a company's activities into a sequence of activities would undermine the company's ability to formulate a coherent strategy, Rumelt argues that in order to assess the appropriateness of corporate strategy, a reduction to basic elements is a necessary prerequisite.

1.3 Planning vs. Implementation in Early Strategic Models

Early strategic models often viewed the strategy process as being linearly segmented across different time horizons, most importantly across the great divide of strategic planning as opposed to strategy implementation. Among other things, this was a helpful device for consultants, making it easy for them to map the strategy process, particularly with respect to the groups in a given company which made strategy and those which were responsible for implementing it on a daily basis as the following charts illustrate.

2.1 Explicit vs. Implicit Strategies

| | Formulation | |
|--|-----------------------|--|
| EXPLICIT | | IMPLICIT |
| The group which formulates the Strategy is different than the group which Carries out the strategy. | | Strategy is both formulated and carried out by the same group. |
| | Location | |
| EXPLICIT | | IMPLICIT |
| Strategy and Strategic planning are highly Formalized processes and are carried out By a "Strategic Planning" group or within A Strategic Planning Department. | | Strategy formulation is very informal and is carried out at the business unit or operating level. |
| | Content | |
| EXPLICIT | | IMPLICIT |
| Strategy content is both formal and is Expressed in official "policies", reports, Strategies, strategy initiatives, and programs. Some forecasting is used. Forecasts are Corporation-wide (made for other Departments). | | Strategy is made up of standard operating procedures (SOP's), and is informal. Strategy is about running things at the business Level-local forecasting. |
| | Implementation | |
| EXPLICIT | | IMPLICIT |
| The group which implements the Strategy is different than the group which Formulated the strategy. | | The same people that formulated the strategy carry it out. |

While these distinctions are often useful for generating a first order map of a company's strategy and its strategy making processes, in many ways they represent a series of linearizations and oversimplifications of the strategic process. In empirical studies, one also finds that these models are not mutually exclusive. Frequently, even while a formal strategic planning group is outlining overall corporate policies and strategies, operating units are pursuing very different strategies, often fundamentally at odds with the official strategy promulgated by the high-level, formal strategic planning group.¹⁴

3.1 Early Conceptual Tools: SWOT Analysis

To return to Andrews, his primary rationale for dividing strategy into separate activities of planning and implementation is that while planning is a largely cerebral process of deciding what the corporation should do, implementation can make or break a corporation in terms of what it can do and what it will do. He does not ignore the interdependency of planning and implementation, but rather subordinates it to the opportunities and obstacles which the implementation stage provides. Andrews' hierarchy of planning and implementation revolves around four central activities in each function. With respect to planning, still very much in the manner of SWOT analysis he first identifies opportunity and risk. Against these, Andrews places the company's material, managerial, technical and financial resources. In at least one sense, this can be viewed as an early precursor to Hamel and Prahalad's "Core Competence of the Corporation".¹⁵ In this sense, we might view Andrews as an early advocate of the core competence school and as developing a strategy model along the lines later suggested by Hamel and Prahalad as opposed to a Michael Porter, "strategic forces of the environment" type model, even though Andrews does place quite a bit of emphasis on the business environment.¹⁶ With respect to both business ethics and business structure, as elements three and four, Andrews includes the personal values and aspirations of senior management,¹⁷ and the recognition of the corporation's economic and non-economic contributions to society.

In terms of strategy implementation, Andrews argues for four different elements, some of which are so obviously dated, that it is clear why so much of Andrews' work has fallen by the wayside, despite his valuable contribution to the foundations of corporate strategy. The first is entitled "organization structure and relationships". Andrews divides this into three parts: (a) Division of labor (b) Coordination of divided responsibility and (c) information systems. While this may be an adequate definition of corporate structure for those companies modeled on the hierarchical model of divisional structure, originally developed in the 1930's, it is hopelessly inadequate for the modern organization based of flat management structure, organizational transparency and universal connectivity (typically in the form of an enterprise resource management package). The second is also a traditionalist approach, but one with stronger linkages to both the historical and modern business literature. This is the dimension of strategy implementation which Andrews calls Organizational Processes and Behavior. His sub categories include (a) standards of measurement (b) motivation and incentive systems (c) control systems and (d) recruitment and development of managers. While rather one dimensional, we can at least relate these to more modern ideas. For example, in setting the criteria for evaluating business strategy, and especially the criterion of appropriateness as developed by Rumelt, (i.e. are we using appropriate measures as indicators of performance) Andrews is, at least, heading in the right direction. What Andrews thought of as motivation and incentive systems has by now, in most major corporate settings, been subsumed into the categories of stakeholder benefits (including employee stock ownership programs) and the theory of the learning organization (also tied to his notion of "organizational development"). With the advent of six sigma quality systems, kaizen and the replacement of most monitoring and control functions by EDP systems, Andrews' ideas about organizational control are largely outdated, although one can see where they were historically a critical element of business strategy. Again employee recruitment and development fits more nearly into the structure of the learning organization than any isolated strategy category.

¹⁴ Ibid. No 11.

¹⁵ Gary Hamel and C.K. Prahalad, "The Core Competence of the Corporation", Harvard Business Review, May-June, 1990.

¹⁶ A critical difference between Porter and Andrews is that what Andrews calls the business environment falls primarily into Porter's category of "jockeying for position" rather than the industry level environment which Porter describes as the bargaining power of buyers and suppliers and barriers to entry and exit.

¹⁷ Gordon Donaldson later shows in a brilliant Harvard Business Review article, how this can easily turn into a "shopping list" of incompatible and conflicting goals forced on middle management, and leading to what Rumelt defines as a structural inconsistency. For details see, "Financial Goals and Strategic Consequences", by Gordon Donaldson, Harvard Business Review, May-June, 1985.

3.2 The View From The Top

Andrews' final set of strategic implementation elements again concerns top management. He defines these as the strategic, organizational and personal characteristics of top management. While these factors are today probably more important in defining an organization's overall character rather than its strategy, it is interesting to note the locus of Andrews' attention. One of the critical questions of contemporary theory is "who are the important people in the firm?" In Andrews' day of complex hierarchical management structures, with divisions working largely in isolation from one another and from customers and suppliers, the executive cadre on the top floor (those with access to the executive dining room, special parking and other symbols of superior authority) was the locus of corporate decision-making and the central object of organizational study. In contrast, modern organizational theorists often use this question in order to differentiate between old-fashioned, hierarchical organizations, where "the boss" is what matters, and modern flat management organizations where the line workers (blue or white collar), the people who produce the corporations core products, are the most important elements of the organization. Andrews' criteria still provide a useful test of corporate strategy for both planning and implementation since we can always ask the question from where do decisions in a particular organization come? In the case of an old-fashioned divisional organization like General Motors they come from "the boss" whether he's on the 14th floor or in the tech center. In more modern organizations, such as Daimler-Chrysler, much valuable input comes not only from the shop floor, but also from customers, who, for example, have begun to play an "up-front" role in automotive design.

Andrews then goes on to perform his environmental "scan". In the spirit of SWOT analysis, he looks at the environment in terms of technology, ecology, economics, industry, society and politics. While this was probably a progressive list for its time, modern business strategy has refined these elements of corporate strategy into a variety of models, using analytical tools like the Growth Share Matrix of the Boston Consulting Group, Michael Porter's Five Forces Model, Porter's Cost/Focus Matrix, James Austin's Environmental Analysis Framework, Theodore Modis S-Curve Growth model, and a host of other more sophisticated models. As indicated earlier, Andrews is probably the original precursor to Hamel and Prahalad's Core Competence model and that is where his greatest point of interest probably lies. Naturally he uses the SWOT framework for the purposes of identifying corporate competence and resources and within that framework he does his best to match corporate competencies with opportunities and eventually to find the right match between products and markets. In this sense, it is not surprising that the greatest utility of his SWOT model and the greatest longevity for his strategic thinking has been found in product marketing, where these ideas still have many useful applications, especially in the early planning stages of product development. What is important for the present study is that we remember Kenneth Andrews initial work on strategy formulation and his very useful definition of operational and organizational *coherence* (even though he doesn't directly phrase it as such) as a test of the viability of a corporation's strategy.

4.1 Appropriateness and Strategy Evaluation: The Next Generation

Richard Rumelt, by comparison, is an analyst of an entirely different sort. As mentioned above, Rumelt was a member of that first group of strategy analysts to actually train and specialize in the field of corporate strategy as the discipline to which their careers would be devoted. In his introduction to "Fundamental Issues in Strategy", Rumelt emphasizes that corporate strategy as a relatively new discipline has roots in many other fields, particularly within the social sciences. Among the fields which Rumelt cites are history, economics, sociology, political science, and applied mathematics. With the more recent work of Theodore Modis, Michael Lissack, J. Doyne Farmer and Brian Arthur, we might also wish to add physics, pure mathematics, computer science and population biology. In any case, Rumelt offers a variety of unique and powerfully phrased arguments designed to pinpoint not just the general issues facing the modern, large corporation, but instead aims to uncover the "first principles" of corporate strategy.

From the outset, Rumelt aims at building a different kind of model than Andrews. Where Andrews is largely descriptive and illustrative, Rumelt is analytical and evaluative. In fact the particular piece whose

insights we draw from here was entitled “Evaluating Business Strategy”¹⁸ and focuses, among other things on questions regarding whether a particular conventional methodology for measuring corporate performance is, in fact, the appropriate set of measures to be used. Also, where Andrews in an early strategist, seeking to define in his own way, if not first principles of strategy, then the basic model of corporate strategy, and ultimately locked into to a model which by its very nature becomes increasingly dated with the passage of time, Rumelt is not only an early researcher in the discipline, but he is also a contemporary author. In the article in question, Rumelt begins with the rather bold statement that “Strategy can neither be formulated nor adjusted to changing circumstances without a process of strategy evaluation.” Like Gordon Donaldson, his first target is the “shopping list strategy” model which is often so central to the preferences of Andrews’ “top management” and which holds as its sacred cow, the value of growth. Foreshadowing later, prize-winning explanations by Michael Jensen and others, Rumelt is already raising the fundamental issue of “value creation” vs. simple growth models.¹⁹

Rumelt further argues that “strategy evaluation is an attempt to look beyond the obvious facts regarding the short-term health of a business, and instead to appraise those more fundamental factors and trends that govern success in the chosen field of endeavor.”²⁰ In choosing those factors, Rumelt identifies four critical areas – consistency, consonance, feasibility and advantage. For the purposes of this paper, and the construction of the 3-C test: Consistency, Coherence and Consonance, we will focus primarily upon Rumelt’s first two categories and treat feasibility and advantage only in passing. This is not to argue that feasibility and advantage are not important, but merely to point out that arguments about feasibility tend to be case-specific and argument about competitive advantage have probably been developed at greater length by Michael Porter, and then by Hamel and Prahalad than by anyone else. This is not to slight Rumelt’s efforts in this area, but simply to point the reader to those areas of Richard Rumelt’s work which are his strongest, and presumably both his most enduring and his most useful for immediate practical application.

4.2 The Process View

In the early part of his essay, Rumelt defines all four characteristics with single sentences:²¹

Consistency: The strategy must not present mutually inconsistent goals and policies.

Consonance: The strategy must represent an adaptive response to the environment and the critical changes occurring within it.

Advantage: The strategy must provide for the creation and/or maintenance of a competitive advantage in the selected area of activity

Feasibility: The strategy must neither overtax valuable resources nor create unresolvable sub problems.

In explaining consistency, Rumelt argues that a first reading gives the impression that such bold flaws are unlikely to be found at the lofty levels of corporate strategy formulation and implementation (although he does not define them quite so separately as does Andrews). Rumelt relates his consistency argument to the implicit organizational coherence suggest by Andrews and even goes so far as to argue that the purpose of consistent organizational policy is to create a coherent pattern of organizational action. Rumelt then offers three diagnostic techniques for determining if there are structural inconsistencies in an organization’s strategy:²²

1. If problems in coordination and planning continue despite changes in personnel and tend to be issue based rather than people based.

¹⁸ Richard Rumelt, “Evaluating Business Strategy”, in Readings in the Strategy Process, Ed. Henry Mintzberg, Prentice Hall, (New Jersey: 1998)

¹⁹ The most lucid explanation of this process is probably given in “The Search for Value : Measuring the Company's Cost of Capital”, by Michael C. Ehrhardt, Harvard Business School Press, 1994.

²⁰ Ibid. No. 18

²¹ Ibid. No. 18

²² Ibid. No. 18

2. If success for one organizational department means, or is interpreted to mean, failure for another department, either the basic objective structure is inconsistent or the organizational structure is wastefully duplicative.
3. If, despite attempts to delegate authority, operating problems continue to be brought to the top for the resolution of policy issues, the basic strategy is probably inconsistent.

We can see from the very phrasing of Rumelt's arguments that he raises powerful issues. Also in addressing consistency as a first principle of corporate strategy he has changed the approach to top management. In Andrews' world, the top management was the critical locus of corporate strategic planning. Among other things, as Gordon Donaldson points out, they had probably not yet learned that corporations do not necessarily possess the inalienable right to dream the impossible dream.²³ In fact, corporations dreaming the impossible dream go bankrupt on a regular basis. Donaldson makes a very strong case that corporations following even moderately inconsistent goals are bound to both underperform in the short term and threaten the stability of their financial position in the long term.²⁴ Thus the consistency issue is one of tremendous importance.

4.3 Organizational Learning: A First Cut

At the same time, it is a very topical issue, and is closely related to process re-engineering, organizational learning and modern organizational design. One of the fundamental goals of all these enterprises is to get rid of these inconsistencies, which Rumelt, using mathematical phraseology in his more recent writings would call the result of in-built zero-sum game strategies. What was a standard modus operandi for the post-war, industrial, large-scale divisionally organized corporation, has long since turned into a competitive disadvantage in the modern demand driven world. As Evans and Wurster note, the creation of new technologies is often the precursor to the disappearance of entire industries.²⁵ When a company or a cluster of companies is built around structural inconsistencies, no matter how great the length of historical common practice, extinction is all but assured. In their words, a company's greatest assets may overnight become the company's greatest liabilities. If Rumelt's arguments are to be taken seriously, then consistency appears to be the first thing which one should look for in understanding corporate strategy.

5.1 The Core Competence of the Corporation – Hamel and Prahalad

An equally significant development in the strategy field is the forward looking methodology developed by Gary Hamel and C.K. Prahalad. In their landmark, 1990 Harvard Business Review article, "The Core Competence of the Corporation."²⁶ Perhaps the most important contribution which this article makes to the strategy literature, indicated by the profound changes it has wrought in much actual strategic planning is the explicit recognition of the profound linkages between a company's core competencies, its core products and its ability to profitably position itself in a changing marketplace. Just as earlier analysts attempted to map strategic patterns in the modern corporation, Hamel and Prahalad's first cut explicitly contrasts the difference in strategic approach demanded by the core competence model when compared to the then prevailing SBU (strategic business unit) model as shown in their chart on the next page:²⁷

²³ Ibid. No. 17

²⁴ Ibid. No. 17

²⁵ "Strategy and the New Economics of Information", Philip Evans and Thomas Wurster, Harvard Business Review, September-October, 1997.

²⁶ Ibid. No. 15

²⁷ Ibid. No. 15, p. 86

Hamel and Prahalad: Two Concepts of the Corporation SBU vs. Core Competence

| | SBU | CORE COMPETENCE |
|-------------------------------|--|--|
| Basis for competition | Competitiveness of today's products | Inter-firm competition to build competencies |
| Corporate Structure | Portfolio of businesses related in product-market terms | Portfolio of competencies, core products and businesses |
| Status of the Business Unit | Autonomy is sacrosanct; The SBU "owns" all resources other than cash | SBU is a potential reservoir of core competencies |
| Resource Allocation | Discrete businesses are the unit of analysis; capital is allocated business by business. | Business and competencies are the unit of analysis: top management allocates capital and talent. |
| Value Added of Top Management | Optimizing corporate returns through capital allocation trade-offs among businesses. | Enunciating strategic architecture and building competencies to secure the future |

Central to this argument is the final judgement on the value-added role of top management, "building competencies to secure the future". This argument later becomes the central theme underlying their 1996 book, "Competing for the Future" wherein Hamel and Prahalad argue that companies which are not engaged in competing for future market opportunities are already doomed to an arena of corporate value creation which lies largely in their past. Their discussion centers around three major arguments: (1) Who will invent the industries of the future? (2) Who will transform the industries of today? (3) How much time and effort is the company devoting to imagining the future of its business? Naturally this jumping off point is then used to create a blueprint for the recognition and development of the necessary strategies to take advantage of these threats and opportunities. While the foregoing is a very simple summary of some rather sophisticated arguments, it dovetails nicely with two streams of thought regarding the role of the learning organization and the process of strategic adaptation.

5.2 Re-examining the Development and Evolution of Corporations

In the first case, Hamel and Prahalad's argument prompts a re-examination of the way in which companies develop, own and control the core competencies which drive the success of their core products in key markets. While earlier authors, such as Porter²⁸ argued that the investment in and ownership of core technologies was a corporation's principal strengths, others, such as Kenichi Ohmae have argued at least as convincingly that as technologies increase the rapidity with which they involve and as research and development costs mount exponentially, a strategy for managing a cluster of proprietary, licensed, and joint-venture technologies is the most cost-effective way of securing a continually improving competitive position. What is interesting to note is that both groups of authors, that is the group following Porter's

²⁸ Porter treats the subject in a variety of fashions, most notably in his articles for the Harvard Business Review, "How Competitive Forces Shape Strategy" (1980), "The Competitive Advantage of Nations" (1989), "Capital Disadvantage: America's Failing Capital Investment System" and "What is Strategy" (1996).

arguments²⁹ as well as the groups centered around Ohmae and Hamel and Prahalad, indicated that even though technologies are rapidly evolving and a company has to stake out a credible future position now, the time horizon for strategic planning has, in fact, expanded, and that the ten year strategic plan is often more important than the annual review.³⁰ In the context of the above typologies, one can see where the role of the central strategic planning group may be more rather than less important for 21st century corporations. The big difference between these groups and their predecessors, as has already been hinted at, is that through a flatter management structure, and a more empowered work force, feedback loops can be built into the planning process from the near, intermediate and far “ends” of the business (to borrow Porter’s “value-chain” terminology) in order to avoid costly future mistakes by a group which is excessively distant from daily operations and daily changes in the marketplace.

5.2.1 New Technologies

In the second case, the argument is very similar to that proposed by Evans and Wurster when they argue that new technologies can and do swallow entire existing industries turning a company’s greatest assets overnight into its greatest liabilities.³¹ The mechanisms by which this kind of product and technology replacement takes place, recognized as early as the 1940’s by economist Joseph Schumpeter, have often been referred to as “Gales of Creative Destruction”. While that term has become a kind of catch-all for alluding to the fluid nature of the evolution of the technological marketplace, many analysts have argued that while it is easy to label the phenomenon, we do not, in fact, know a great deal about how that replacement process takes place. Since the early 1990’s, however, there has been a growing body of literature, much of it linked to earlier studies in physics and mathematics in chaos and complexity theory (particularly the modeling of non-linear dynamical systems) which aims at explaining the replacement process in a mathematically rigorous fashion.

Perhaps the richest descriptions of this process come from two very different kinds of authors. The first is Theodore Modis,³² a one-time physics professor who entered the business world in order to teach marketers how to construct better forecasts. The second is Brian Arthur, originally an economist by training, but who went on to co-author some of the most important work in probability theory, which he recapitulates in his book “Increasing Returns and Path Dependence in the Economy”³³ In each case, the authors place at the core of any strategic endeavor the construction of an accurate map of the future. While a paper of this limited length cannot go into great details regarding the tools used in this school, they can be regarded as general applications of non-linear dynamical systems (or chaos and complexity theory in popular lexicon) to predicting future product and market behavior, which Hamel and Prahalad argue

²⁹ See Slater, Stanley F., and Olson Eric M., “A Fresh Look and Industry and Market Analysis”, Business Horizons, January-February, 2002 for an analysis of the ways in which Michael Porter’s Five Forces Model (Porter, 1979) can be modified to reflect subsequent globalization and the evolution of technology in which they develop an “augmented model for market analysis” (pp.15-16) In particular, they incorporate the additional features of “complementary competition” and “complementors”, as well as “composite competition”, “customers”, “market growth” and “market turbulence”.

³⁰ In a similar vein to No. 29, above, An article from “Fast Company” (Issue 49, August 2001, pp. 108 ff.) by Jennifer Reingold, entitled “Can C.K. Prahalad Still Pass the Test?”, explores some of the ways in which Prahalad has adapted the strategies based around the concept of *core competence* (which he and Gary Hamel developed in the 1980’s and 1990’s) for the 21st century. In particular, Prahalad explains that his newer approach is based around universal inter-connectivity and breaking the mold of the print driven society. In describing his new approach, for which he has drawn on the Sanskrit word “Prajā” meaning “the assembly” or “the common people” (alternatively, “the people in common”), he argues that the mass availability of data and the ability of consumers to personalize their experience over the internet is a fundamental driver of changes so profound that he calls them “cosmic” (with reference to their paradigmatic scope).

³¹ Ibid. No. 25

³² Modis’ derived much of his original modeling technique from the work of Cesare Marchetti from the International Institute of Advanced Systems Analysis near Vienna, expanding on it considerably in “Conquering Uncertainty” (McGraw Hill, 1999) which provides detailed mathematical models of Schumpeter’s “gales of creative destruction” using such varied examples as the replacement of the horse by the automobile, the fountain pen by the ballpoint, and various computer models produced by his former employer, Digital Equipment. In his most recent book, “An S-Shaped Trail to Wall Street” (Growth Dynamics, 1999) he applies the same kind of methodology, using sigmoid growth curves from population biology and a parametric treatment of various constants or “invariants” to analyze stock market behavior, including a novel methodology for distinguishing between overvaluation and stock market “bubbles”.

³³ W. Brian Arthur, “Increasing Returns and Path Dependence in the Economy”. While perhaps of less interest to business strategists than his chapters on “Competing Technologies, Increasing Returns and Lock-in”, “Strategic Pricing in Markets with Increasing Returns” or “Path Dependence, Self-reinforcement and Human Learning” his chapter ten, “Strong Laws for a Lass of Path-Dependent Stochastic Processes” co-authored with Russian mathematicians Yuri Emoliev and Yuri Kaniowski represents a major breakthrough in applied mathematics and provides an unassailable foundation for his market arguments.

convincingly is the central strategic element of value creation in the firm. In this sense, the early twenty-first century is witnessing the development of a new microeconomic theory of the firm. This is not so much to say that the standard neo-classical models must be discarded across the board, as it is to recognize that they may not always be the appropriate models which strategic planners ought to be using to analyze their companies, industries and markets. Indeed, Arthur himself is very specific that before one can begin a focused analysis, it is important to determine whether the particular market, product or company is in or is about to enter a situation of stable, diminishing or increasing returns.³⁴ Each demands a different mode of investment, market entry and corporate strategy.

5.2.2 Growth

Modis offers some similarly helpful guidelines. His primary concern is about growth, and in the context of Hamel and Prahalad, this is a critical way of competing for the future. In “Conquering Uncertainty”, Modis brings up a particularly relevant example from the computer industry in the way in which he models industry “precursors” and “overshoots” (product performance which falls, at least temporarily outside the fitted “S-curve”). The classic example was DEC’s 1993 64 bit RISC processor powered personal computer. Because this was a classic precursor, it never passed the 7% benchmark which in S-curve shaped growth signals the onset of rapid or exponential sales growth (the process which Bruce Henderson and the Boston Consulting Group describe as the transition of a product from a “dog” to a “star”). Modis argues that by misunderstanding the “precursor” nature of the product, DEC abandoned what might have later turned out to be a phenomenally successful product, and in many ways simply abandoned the PC market altogether. The product which they focused on instead was one which had shown steady growth for several quarters. Unfortunately, once again, confusing the regression of a local data to a fitted linear pattern with a high slope while failing to recognize the inevitable sales slowdown locked DEC into a process of overproduction. In BCG language they starved their star while overfeeding their cash cow. Not surprisingly, Modis often works from a “seasonal” metaphor adapted from the BCG growth-share matrix, which helps to identify a variety of characteristics necessary to help a firm plan not just for the present but for the future.

What may be most interesting about the work of Modis, Arthur, Lissack and others is that they provide the strategic planner, or the manager engaged in strategic planning with an entirely new set of tools, primarily mathematical in nature, which allow a firm to model both its present competencies and its necessary future activities. Interestingly enough, while the difficulty of mastering some of these tools is such that it virtually necessitates a centralized strategic planning unit, at the same time, the discovery of increasing returns, path dependence, sigmoid growth patterns and other similar elements of chaos and complexity theory indicates that any strategic planning unit must have a robust network of feedback systems between the planners and the line managers.

Later in this analysis we will use Michael Lissack’s treatment of complexity theory and biological science concepts such as the “fitness landscape” for understanding corporate strategy as an ongoing process of not just modeling, but also creating the future. One of the most interesting aspects of the population biology metaphor is that it illuminates the ways that different participants change the competitive landscape both by their presence and their particular strategic choices. While game theory has provided a number of insights to characterize certain kinds of strategic behavior by corporations,³⁵ particularly in situations where competition takes place between a small number of competitors, the biological metaphors of complexity theory open up a new understanding of the business environment itself.³⁶

³⁴ Ibid. No. 31, pp. 13-32.

³⁵ See Avinash Dixit and Barry Nalebuff, Thinking Strategically, (W.W. Norton, 1993) and Robert M. Axelrod, The Complexity of Cooperation, (Princeton University Press, 1997)

³⁶ Michael R. Lissack, “Chaos and Complexity-What does that have to do with management?”, Working Papers, Henley Management College, U.K. (2000)

5.3 From Coherence and Consistency to Consonance

To return to our earlier analysis, coherence, as it is treated in Andrews' work on patterns of corporate organization and strategy, then becomes the second level of consistency. Consistent strategies should produce coherent operating methods. Certainly this fits with the claims of other modern strategy researchers, particularly Kenichi Ohmae³⁷, Michael Porter, Gary Hamel and C.K. Prahalad. Coherent strategies are generally more easily and more frequently observed in flat, transparent, modern organizations than in hierarchical organizations where individual departments each work to their own set of norms and individual output or contribution to corporate goals is not easily measured. Coherence might also be characterized by what Michael Porter calls "second order strategic fit". In this context we could call "consistency" the equivalent of first order fit in a value chain. If a company cannot clearly demonstrate this characteristic, then its prospects for long-term survival are poor. The ability to integrate across departments in value producing way meets both Andrews' and Rumelt's criteria of coherence. The implication is not only does the organization function, but it functions well in a value-creating manner.

Consonance is a bit more difficult to characterize. One reason for this difficulty, is that unlike Andrews' strategic definitions, which are largely static (and that is another reason why they have gradually fallen out of fashion) Rumelt's criteria, particularly that of consonance is intrinsically dynamic. Rumelt himself says that consonance is a matter of an organization both fitting itself to the environment and competing against other firms which are also trying to fit into that same environment. This technically described by Kauffman and Lissack in terms of the "fitness landscape" a topic which we will address shortly.

Before moving on to discuss fitness landscapes and other biological and topological metaphors for product and service markets, it might be useful to try and characterize the concept of consonance in some simpler terms. One way of understanding consonance is by thinking a bit about its opposite – dissonance. A strategy is dissonant whenever it produces conflict within the environment. In at least one sense, many of corporate social responsibility arguments can be traced to this concept, which at the same time is critical for long-term corporate success.³⁸ Evans and Wurster,³⁹ also are describing dissonance when they explain the technology revolution initiated by universal connectivity. Encyclopaedia Britannica, which was heavily dependent on intense personal selling failed to adapt to the dynamics of the changing information market occasioned by the rise of the personal computer and the internet. It doesn't help to be running a paper business, particularly one which has 95% of its costs either directly or indirectly related to its sales force, in an electronic world, where the same sales message can be sent for a tiny fraction of the cost. Microsoft Encarta all but wiped out Britannica even though they had a vastly inferior product because they had a consonant strategy and Britannica did not.

In the broadest possible sense one can think of the 3-C test as being very much like working a jigsaw puzzle. At the first level of fit, individual pieces must have matching pieces or the puzzle will not come together. This is consistency. At the second level of fit, when the pieces are all put together, they must make a completed picture. This is coherence. One of the classic lines of inquiry at the Harvard Business School (and echoed in two decades of Harvard Business Review articles) has revolved around the treatment of a business as a portfolio of assets and the pros and cons of the SBU (Strategic Business Unit) method of organization. While the SBU approach has helped many corporations, especially conglomerates with diverse or unrelated holdings, manage their assets more profitably, it has also been a substantial destroyer for many corporations because business independence blocks cross-subsidization and what Michael Porter has come to call "third order strategic fit" – products whose competitive advantage rests on the uniquely integrated characteristics of a complete set of activities (each the result of making clear strategic tradeoffs) across the entire value chain. In other words, products that come out of companies with third order strategic fit are very hard to imitate, and very hard to compete against because to duplicate the product (often a unique bundle of products and services) you have to duplicate the entire value chain of its producer. To return to our jigsaw puzzle analogy, coherence means that when you place all the SBU's together either they form integral parts of a single enterprise or they fail to do so. Whether it is the SBU's

³⁷ See "Managing in a Borderless World", Kenichi Ohmae, Harvard Business Review, May-June, 1989.

³⁸ Perhaps the most interesting recent set of arguments regarding corporate social responsibility are those which occur in "Social Capital and Community Governance" a 2001 Santa Fe Institute working paper by Herbert Bowles and Samuel Gintis who illustrate a variety of ways in which corporate monitoring affects the strategic decisional calculus.

³⁹ Ibid. No. 25

of a diverse conglomerate or the operating units of a single company, if they don't have second order fit, the business will lack coherence, and ultimately that means a lack of survivability.

Finally, the rule of consonance says that we must not only have a completed jigsaw puzzle, but that we must have one which is pleasing. In fact, consonance says not only that the final product must be pleasing, but once in tune with the environment, it must stay in tune. This is the dynamic of competitive advantage. Times change and products and organizations must change with the times. To draw on the motion picture industry, in the mid-1980's, Ted Turner purchased MGM's entire film library (all the films ever made by the studio from its inception to the time of the merger) for substantially less than it cost James Cameron to film a single motion picture, "Titanic". Turner's use of the MGM library was value enhancing, and he made it the foundation not only for his then existing Superstation WTBS, but for his entire network, eventually making him the single largest shareholder in Time-Warner Communications. Consonant strategies are powerful. Dissonant strategies just fade away. Turner's treatment of the MGM acquisition is an excellent example of what Lissack calls "sussing out the environment of the future."

6.1 Strategy and the Future

As indicated previously, Lissack draws on the literature of population biology to describe the competitive environment as a "fitness landscape". Following Kauffman, "a fitness landscape is a mountainous terrain showing the location of the global maximum (highest peak) and global minimum (lowest valley)", where the height of a feature is a measure of its fitness.⁴⁰ What is interesting about the fitness landscape model is that it is a dynamic rather than a static model. Kauffman argues that real fitness landscapes and environments are not fixed but are constantly changing. The change is a product of the activities of the various species on the landscape. In this sense there is a remarkable degree of congruity between the fitness landscape metaphor and many models of product/market competitiveness. Kauffman and Lissack describe these changes as "deformations" and ascribe them to the same kinds of forces which Michael Porter describes as "jockeying for position". In more precise terms, Kauffman and Macready argue, "real fitness landscapes in evolution and economies are not fixed, but continually deforming. Such deformations occur because the outside world alters, because existing players and technologies change and impact one another, and because new players, species, technologies, or organizational innovations enter the field."⁴¹

Kauffman and Macready argue that a jagged fitness landscape means that solutions tend to be local and incremental rather than global and sweeping. Because we are considering a complex metaphor here, it is important to specify that local and global are mathematical terms referring to the character of the competitive environment and not geographical terms. In drawing metaphors from the literature of complexity theory, Lissack also uses the concept of "basin of attraction", familiar to those who have read some chaos theory as "strange attractors". A major portion of Lissack's argument is first devoted to clearing up the common misconception that a strange attractor is a thing. An attractor, in the mathematical sense, defines a solution basin – a place where solutions to particular problems or iterated equations are likely to occur. What's important from a business sense, and where the attractor metaphor has value in relation to the concept of fitness landscape. In this case, an attractor (chaotic or regular) is most important for its passive nature. It pulls participants on the fitness landscape into particular solution basins. A simple example of this is the "network" effect visible with the growth of the internet. In a networked commerce system, the value of the network is proportional to the number of participants in the network.⁴²

6.2 Strategy as Metaphor

Lissack ties all this together with the idea that much of business activity is perceived as metaphorical and that the language and metaphors of chaos and complexity can enrich this process. At the simplest

⁴⁰ Stuart Kauffman, *At Home in the Universe*, Oxford University Press, 1995, also Kauffman, S. and Macready, W. "Technological Evolution and Adaptive Organizations, Complexity, Vol. 1, No. 2, 26-43

⁴¹ Ibid. No. 34

⁴² See Hal Varian and Carl Shapiro, "Information Rules: A Strategic Guide to the Network Economy" (Harvard Business School Press, 1998)

level, he begins with the idea that many managers view business as a kind of race, be it a race for production, sales, core products or new technologies. Interestingly enough, Lissack finds that because basins of attraction are passive they have the effect of reinforcing existing behaviors on the part of managers. Once in the basin of attraction, the manager will behave essentially in the fashion the attractor defines. To get a concrete example of this one can look at Michael Porter's analysis of the airline industry and Continental Airlines disastrous imitation of Southwest by the introduction of "Continental Lite".⁴³ Consistent with both Porter's treatment and with Rumelt's consistency problem, Lissack argues that "In the metaphor of patterns, decisions fall into a set of predictable behaviors which need reinforcement. In the metaphor of attractors, the actions are self sustaining. Once in the basin of attraction and attractor will behave much as the attractor outlines. The problem becomes one of classification—which basin of attraction is the client, target, customer, whomever in? The basin defines the action. Because the attractor is passive, reinforcement of old messages, to promote an active choice but it is a waste of time and money."⁴⁴

The introduction of the complexity metaphor creates a new scope for the definition of strategy. Lissack argues that the question "what is a strategy" was originally rather simple, as our initial analysis of Andrews demonstrated. Quoting Lane and Maxfield, he argues that even where choosing a strategy is case of optimizing values or making tradeoffs, the dynamic nature of the business world, or its fitness landscape, precludes any passive decisionmaking or preconceived formulae.⁴⁵ Lissack's own definition of strategy definitely indicates how chaos and complexity force a different kind of understanding of the problem of corporate strategy:⁴⁶

Strategy lies between directedness and execution. It lays down "lines of action" that the firm intends to initiate and that are supposed to bring about desired outcomes. Since outcomes depend on the interactions with and between many other agents (inside and outside the firm's boundaries) strategy really represents an attempt to control a process of interactions, with the firm's own intended "lines of action" as control parameters.

No doubt, this is a highly abstract definition but it helps put a handle on the definition of strategy across a constantly changing fitness landscape. Lissack also argues that when the "foresight horizon"⁴⁷ is clear it maybe possible to anticipate the behavior of both the environment and the firm's competitors. Notice that this definition does not relieve the corporate strategist of any of the responsibilities described by Andrews, Rumelt, Porter, Ohmae, and Hamel and Prahalad. What is interesting about Lissack's treatment of the foresight horizon is that when it becomes less clear, the strategic alternatives and the path to optimal allocation of effort becomes far more difficult to understand or anticipate. Not unlike Joel Shoemaker's "scenario planning"⁴⁸ Lissack then sees the firms resources for strategic planning necessarily more directed towards foreseeing possible future conditions. An effective strategy under these kinds of uncertainties needs to include provisions for continuously monitoring the world (markets, technologies, customer preferences, etc.) as well as mechanism which can be used to adapt to unexpected changes.

6.3 Strategy and Control

In this sense, Lissack argues that modern strategy must become something very different from the earlier models which relied on control and control mechanisms. He argues that not only are strategy and control different but that their relationship must change as well. Under such conditions he argues strategy is as much an attempt to understand control (hence the earlier notion of "sussing out the market") as it is to exercise control, noting:⁴⁹

⁴³ Ibid., No. 11

⁴⁴ Ibid. No. 34

⁴⁵ Lane, D. and Maxfield, R. "Foresight Complexity and Strategy" Santa Fe Working Papers, #95-12-106

⁴⁶ Ibid. No. 34

⁴⁷ The foresight horizon represents the ability of the firm to accurately model the fitness landscape over a particular period of time.

⁴⁸ Joel Shoemaker, "Scenario Planning: A Tool for Strategic Thinking", Sloan Management Review, 1996

⁴⁹ Ibid. No. 34

Thus in a complex world, strategy is a set of processes for monitoring the behaviors of both the world and of the agents of the organization, observing where attractors are and attempting to supply resources and incentives for future moves. Command and control are impossible (at least in the aggregate), but the manager does retain the ability to influence the shape of the fitness landscape.

Lissack fine tunes this analysis by citing Kauffman's maxim that "adaptive organizations need to develop flexible internal structures that optimize learning. That flexibility can be achieved, in part, by structures, internal boundaries and incentives that allow some of the constraints to be ignored some of the time. Properly done, such flexibility may help achieve higher peaks on fixed landscapes and optimize tracking on a deforming landscape."⁵⁰

Both Kauffman and Lissack propose a variety of techniques for moving firms off local minima and getting companies to higher maxima on both the static and deforming fitness landscape. Although the scope of this paper is too brief to consider these approaches, such as "simulated annealing" and "patches". Suffice it to say that not only has chaos and complexity theory expanded our view of the strategy process and moved the consideration of corporate strategy from statics to dynamics, but it has also opened up an entirely new range of strategic possibilities for responding to the uncertainties which are an intrinsic part of the strategy process.

In section two, Matthew Dadmun will explore a recent NK-Boolean fitness landscape simulation conducted by Pankaj Ghemawat of Harvard Business School and Daniel Levinthal of the Wharton School. In section three, Neil Lanteigne will address the implementation of strategy with a systematic series of prescriptions.

⁵⁰ Ibid. No. 34

Review of Pankaj Ghemawat and Daniel Levinthal's "Choice Structures, Business Strategy and Performance: A Generalized NK-Simulation Approach"

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7.1 Pankaj Ghemawat and Daniel Levinthal's NK Simulation Approach to Choice Structure in Business

Building on Kauffman's work with NK-Boolean fitness landscapes Pankaj Ghemawat of Harvard Business School and Daniel Levinthal of the Wharton School, University of Pennsylvania have constructed a NK-Boolean dynamic fitness landscape simulation examining the impact of a constrained choice structure on the fitness landscape of a firm [Ghemawat and Levinthal 2005]. Ghemawat and Levinthal's model provides us with a tool for better understanding how the strategic structure of a firm affects its ability to move to achieve an optimal level of fitness. In doing so they provide part of a systematized approach to enabling managers to assess and shape their firm's fitness landscape

7.2 Examples of Primary Strategic Choices Dictating the Firms Overall Strategic Structure

Ghemawat and Levinthal examine two cases studies, Southwest [Porter 1996] and Vanguard Group [Siggelkow 1998] to show the formation of longitudinal links based on higher level strategic choices and dependent subordinate choices. In their examination of Southwest based on Porter's 1996 case study Ghemawat and Levinthal focus on the six "higher order strategic themes" (to use Porter's terminology) which appear to be the drivers for the other subordinate strategic choices that Southwest makes. In particular they examine the choice that seems most central to Southwest strategic choice structure "high aircraft utilization". Ghemawat and Levinthal point out that Southwest's decision to utilize its aircraft for more flight hours than its competitors directly link to a series of other choices that are necessary to support this primary choice; productive ground and gate crews, limited passenger amenities, short-haul point-to-point service [Ghemawat and Levinthal 2005]. This primary strategic choice then dictates a number of subordinate choices that are needed to support it which in turn inform a number of subsidiary choices. A similar pattern can be found in Siggelkow's analysis of the Vanguard Group. While the full map of the linkages between Vanguard's main activities is quite complex, Ghemawat and Levinthal feel that the main strategic decision that defines much of its current structure was to act as a low-cost provider of funds. This seems to have dictated much of Vanguard's subsequent strategic decisions i.e. focusing primary upon index funds, shifting way from distribution through broker-dealers, and moving to a no-load cost bases [Ghemawat and Levinthal 2005]. This primary choice serves as a low cost provider than became an attractor agent that helps define the other choices or actions taken by the firm.

The Southwest and Vanguard case studies would seem to suggest the importance of one or a small number of key strategic choices in defining the overall choice structure of a firm. It would seem apparent, and to

certain degree self evident, that certain primary strategic choices made by the firm will of necessity affects the subsidiary choices that the firm makes. Ghemawat and Levinthal then address the issue of how to model the links between interdependent asymmetrical choices and examine the relative importance to the overall fitness of the firm of the linkages between these primary and subsidiary choices.

7.3 General Description of Ghemawat and Levinthal's Simulation

In Kauffman's original NK model there was all of the potential choices that a firm could make were considered to be equally important and the search for higher levels of fitness is carried out as a random walk across the fitness landscape as described above. As it stands then the NK model cannot account for the asymmetric relationship between strategic choices that firms face.

In order to better represent the asymmetric nature of the choices facing a corporation Ghemawat and Levinthal replace the interactive parameter K with an adjacency matrix. As they describe it the adjacency matrix:

How different choices (the vertices in the graph) are linked (the lines in the graph). In such a matrix, choice variable j 's effect on other variables is represented by the patterns of 0s and 1s in column j , with a value of 1 indicating that the payoff to the variable in the row being considered is contingent on variable j , and a value of 0 denoting independence. Similarly, reading across row i in such a matrix indicates the variables the payoff of choice variable i is itself contingent upon. The principle diagonal of an adjacency matrix always consists of 1s, but the matrix itself need not be symmetric around that diagonal [Ghemawat and Levinthal].

In order to simplify their examination of the relationship between asymmetric choices Ghemawat and Levinthal elect to look at two adjacency matrices that highlight classical types of choice asymmetry hierarchy, and centrality. In the hierarchical matrix choice 1 is the most important influencing all other choices below it choice two is the second most important and so on to the final choice (in this case choice 10 were $N=10$) which is influenced by all preceding choices but influences only itself. For the centrality matrix choice 1 is the most central both influencing and also being influenced by all other possible choices, choice two is the second most central being influenced by all other choices and influencing all choices with exception 10 and so on. These two matrices are benchmarked against a traditional NK structure. The matrix in this case would be structured such that there would be K 1s in each row and column but they would be randomly distributed across the matrix. For their simulation Ghemawat and Levinthal put $K=6$ which proved the same number of peaks at the other two matrices [Ghemawat and Levinthal 2005]

7.4 Simulation and Results

Using this modified NK model Ghemawat and Levinthal then examine the effects of asymmetrical relationships between linkages. First they examined the relative importance of high order choice in obtaining a global optimum, by setting each policy choice in turn to the global maximum. If a system can reach a high optima with simply a few high level decisions being set then strategic planning can be done at what might be described as the grand strategy level since the remaining choices will be self evident and dictated by the primary choices. If on the other hand most of the choices must be preset before the system reaches a global optimal then it suggest that strategic planning must be fairly involved and must spell out both primary and secondary choices within the firm. According to Ghemawat and Levinthal's results the global optima for any of the three matrices is not reached until almost all of the variables are set at the global optima. Ghemawat and Levinthal attribute this to the rugged nature of the fitness landscape over which the firm moves and the large number of local fitness peaks that it can come to rest on. This would seem suggest the importance of strategic planning being operative within all levels of a corporation's range of activity and the high level of specificity need to move a firm to high fitness optima. This would seem to reinforce Porter's [Porter 1996] concept of the need for a strong cross-sectional links and a high level of between activity centers within a firm's value chain. One point to note is that both constrained matrices expressing centrality and hierarchy perform better than the unconstrained random matrix at all degrees of match except the very extreme were almost all states are set at the global maxima. This would seem to

suggest that some form of over-arching choice structure that provides coherence to and organization is preferable to a random search for fitness. Further the greater degree of strategic control that can be exercised over the choice structure of a firm the greater the likely hood of the firm reach a high level of fitness, provided those making strategic choices for the firm have a reasonable appreciation for where the global optimum might lay.

Next Ghemawat and Levinthal examine how historic constraints effect the movement of a system to an optimal fitness level. To do so each of the possible N choices is set in turn at a point below the global optima starting with the higher level choices and moving to the more subordinate choices. Unsurprisingly both of the constrained systems hierarchical and central have relatively low levels of fitness when their higher order choices are set at levels below the global optimal and gradual improve as the mismatch is applied to lower order choices instead. Interestingly while the centrality based structure has a slightly higher level of fitness than the hierarchical based system it level of overall improvement is much more modest than the hierarchical system as the preset suboptimal moves to lower order policy choices to the point where the central system remains relativity stagnate while the hierarchical system quickly surpasses it. Ghemawat and Levinthal suggest that this is because lower order choices in centrality interactive systems are not heavily contingent on other choices hence they there is less of a compensatory shift away from the suboptimal variable level in response to movement by higher order variables. On the other hand under a hieratical choice structure the higher fitness levels of high order choices will have a compensatory effect for the low level of fitness of a lower order choice, however a low level of fitness at the higher strategic level will have a strongly negative effect on the level of fitness of the system as a whole.

7.5. Strategic Coherence

We can make a number of general observations based off of Ghemawat and Levinthal's research. First, in order for a high level strategic plan (i.e. the higher order choices) to be effective they must be heavily supported by lower order subordinate choices, this reinforces the importance of having strong cross sectional linkages between different sections of the firm. Based on their version of the NK model Ghemawat and Levinthal show that it is insufficient for the management of the firm to make the correct grand strategic choices with out regard for the lower order choices, their model seems to imply that the firm must create a strong a fit as possible across all of the choices it makes. This is probably an effect of the complexity problem that Kauffman highlighted in his original model. When there is not a strong degree of fit between available choices, in this case when there are potential for significant differences in fitness levels between primary and subordinate choices, then the problem of conflicting constraints rears its head and the fitness levels of the local optima for the firm's fitness landscape will be decreased.

This is supported by much of the anecdotal literature on the topic in which companies with a strong strategic plan fail to successfully implement it across their organization. An example of this sighted by Ghemawat and Levinthal is the case of Continental Lite, Continental Airlines ill fated attempt to compete with Southwest Airlines as a discount carrier. Continental Lite's primary strategic choice, to provide discount air service, ran up against a series of subordinate choices that were spill over from its more traditional business segment, primarily the decision to provide many of amenities such as baggage checking, seat assignment, and frequent flyer awards, that it used with its regular air service [Porter 1996]. In terms of the of the NK model the conflicting constraints between Continental Lite's primary strategic choices and its subordinate ones was such to lower the available fitness landscape to the point were the local fitness peaks available to Continental were insufficient for it to compete effectively in the marketplace.

7.5.2. Historical Constraints and Adaptability

A second important point made by Ghemawat and Levinthal is the role that a strategic choice structure can have in overcoming historical constraints on a firm. As discussed above when the mis-specified choice that is the choice that is a choice that for historical reasons is inconsonant with the rest of the firm's choice

structure occurs in a choice that is subordinate to other choices but has no choices dependent upon it, the effect will be mitigated and since and the fitness of the system will not be adversely effected. If on the other hand the historical constraint occurs in a choice that has a number of choice that are dependant upon it than the result will be damaging to the overall fitness of the system. As an extension of this Ghemawat and Levinthal's findings suggest that a choice structure allows for choice that are subordinate to other choices but in of themselves have no choices dependant on them provided a robustness and flexibility to the choice structure of the firm since if one of these subordinate choices is constrained the policy dictated by the primary strategic choice can be shifted elsewhere [Ghemawat and Levinthal 2005]. It is important to note of course that when the primary strategic choice is improperly selected it will have a significant impact on the fitness of the whole system.

7.6 Conclusion

Ghemawat and Levinthal's simulation allows us to discuss with greater precision the strategic structure of the firm and its impact on the firm's ability to reach an optimal level of fitness. While the simulation is of course abstract representation of an organization's fitness landscape Ghemawat and Levinthal's model enables us to develop a clearer picture of the effects of linkages between strategic choices and the ability of the firm to reach an optimal point of fitness which in this case the ability to remain operational and meet the required rate of return for its investors. Ghemawat and Levinthal's model allows for a more systematized approach for measuring the implication of particular decision making processes and strategic planning within an organization. In the broader context of the paper it represents another step in the process of understanding how the managers of firms develop and implement decisions and how that process affects the potential fitness of the organization. While as, Ghemawat and Levinthal point out, there is still considerable theoretical and empirical work to be done in the study of firm's strategic choice structure this simulation provides one step in the process of developing a methodological framework for the study of the development of a coherent strategic choice structure for the firm. As such represents a move forward in the study of corporate strategy.

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Formulating and Implementing Strategy

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8.1 Introduction

Change is something that many organizations in the world struggle with. Change can be as simple as switching coffee types in the cafeteria or it can be more complex as in a complete restructuring of a global corporation. In the same way, change can also be good or bad. A lot of what determines whether change is good or bad is how a company manages change.

In order to ease the conflict that change can potentially cause in an organization, it is important to understand the path and steps needed to institute change in an effective manner. These steps may not be so obvious from a top level when viewing the process a company uses to implement change. Instead, eight steps presented by Burford Consulting drill further down and focus more on how to accomplish a vision within the organization. This task is broken down into eight sequential steps that begin with forming a vision and gather support and end with the importance and necessity of maintaining change (Cherrett & Griffiths, 2003).

In this paper, I will also discuss and summarize the book titled “The Art And Discipline Of Strategic Leadership” by Mike Freedman (2003). The book is modeled upon the Kepner-Tregoe Five Phase Strategy Model (Five-Phase Strategy Model, 2004). In this summary, I will discuss each of the five phases of formulating and implementing strategy. For the purpose of clarity, I will also incorporate other research on leadership and international business strategy into this summary.

8.2 Why Change?

Change is one of those words that can illicit several different kinds of emotions. Throughout history, change has been responsible for “keeping things interesting”. It has created new opportunities and it has taken away existing opportunities. One example of change that many people experience is in the corporate world. The type of change experienced here is significantly different from change that might result from switching your telephone long distance carrier, for instance. In the corporate world, change ripples throughout organizations and can have both positive and negative ramifications if not properly managed.

One of the precursor questions to change is: why? Why a company changes can be due to an infinite number of situations. Perhaps their current situation is not profitable and they need to restructure to improve their chances at gaining a larger global market share. Or, new technology has just been introduced that promises to double a company’s product development cycle. The first situation requires a large amount of change in the form of a company overhaul. This process is sure to affect all areas of the company and is not a trivial task. The second situation could go both ways – it may also be a large task or it could be a small task. A company may also elect to increase its efficiency internally by making changes to group structures. For example, instead of holding fast with a strict hierarchical structure, a company

may choose to create self-managing teams instead. This style may fit the company's situation better and will eventually increase efficiency within the organization (Covi, 2004).

Another example would be if a company is enduring economic losses and needs to restructure their employee work force due to lagging sales. This would require layoffs and possible department restructuring or elimination. While this type of change is not as desired as other types, it is a valid reaction to decreasing sales and profit. The marketplace in general is a very dynamic entity and demands a similar level of fluidity from its participants. Change itself in this industry is typically very expensive and organizations are usually resistant to large changes. Changing for the sake of change is not a good way to proceed. Instead, change needs to be driven by a valid goal and with the belief that the benefits will outweigh the costs. For example, an organization may be highly reactive and needs to implement more plan-oriented processes. In this case, the organization may ultimately benefit from a large-scale change even though the process to accomplish this will undoubtedly be costly and time consuming.

8.3 The Difficulties of Change

There can be good change, there can be no change, and there can be bad change. How change is classified really depends on the outlook of the individual. This outlook becomes the determinant of how successful the change becomes. In a general sense, there is usually a strong resistance to change by employees within a company. This resistance sprouts from many different sources including one of the more common sources: fear.

In a company, particularly large companies, an individual cannot know every aspect and detail that transpires. When people propose change, there are other people who will resist it due to a lack of knowledge. Once people become more familiar with the situation and have the necessary knowledge to understand, the initial resistance begins to wear off as they formulate a picture of the future rather than a vague haze. For instance, consider a company who wants to merge together two departments that pursue similar goals. The main goal and thought process behind this task is to increase efficiency. It is believed that consolidating these two departments together will make record-keeping much easier as well as increasing output due to the combined information and knowledge that each department provides. In essence, a type of synergy is the expected result.

While this looks like a good option to executive planners who have a bird's eye view, the employees in each department may not agree. Some employees may find that the six weeks it took them to learn the computer system was a waste of time as the new combined departments are going to use a completely different system and it will take another six weeks to learn. This kind of reluctance can easily transform into something more damaging such as resentment depending on the company and its corporate culture.

People may feel very comfortable in their current situations and can be very defensive to any kind of change. This was the case described by Spencer Johnson in his book "Who Moved My Cheese" (1998). The character, Hem, was happy with his current block of cheese although he knew it would not be there forever. Even when a new block of cheese was found, he still resisted against changing his current situation even though his old block of cheese was depleting at a fast rate.

Of course, "Who Moved My Cheese" in reality references real situations that people deal with (Johnson & Blanchard, 1998). Many of the people in companies are like each of the characters in the book: Sniff, Scurry, Hem, and Haw. There are those that respond to change well and quickly embrace it. There are also others who prefer to maintain the status quo and resist change if possible. The main challenge is to strike a balance between these types of personalities when instituting change so as to create as smooth a transition as possible.

8.4 Managing Change

As a leader it is necessary that you get people to realize the significance of the issues you are trying to address. It is essential that people realize how important and how necessary the changes you are trying to implement are. Leaders need to get people to focus their attention on the relevant issues by finding "creative ways to signal the new situation is different" (Heifetz & Linsky, 2002).

Just as leaders have to know how to respond to the external dangers they face in leading and manage others through change they need to be able to manage the stress and personal challenges they will face as

well. They need to be able to manage and overcome their own personal frustrations so they can stay alive to see the fruit of their efforts (Russel, 1999).

Leaders need to be aware of the resistance and dangers they inherently face being in a leadership role. The obstacles and perils of leadership are real and it is essential that leaders respond to them in an effective way. If they don't they will not be able to stay alive and successfully implement the changes that are required in the world today. It is important that leaders not only recognize the risks they face and how to effectively respond, but they must not lose sight of the reason for choosing to lead in the first place. In the midst of all the action, leaders need to remember why they choose to be in the role that they are in. They need to hold on to the love they have for people and they need to remember that the risks they take are worth it.

Jim Collins, author of *Good to Great*, discusses the concepts of confronting the brutal facts and a culture of discipline. These concepts both require change and the successful management and implementation of change. According to Collins, if you hire the right people, they will be able to accept change and already have the discipline to implement change with unwavering dedication to the company. However, if an organization is working on going from good-to-great, they should have some knowledge of change management for those employees who aren't as open to changes (Collins, 2001).

John Gray, author of *Ch-ch-changes*, suggests an eight-step process to managing change. "First, they create a sense of urgency. Then, they build a guiding team, get the vision right, communicate effectively, empower action, create short-term wins and refuse to let up" (Gray, 2004). Collins maintains that if an organization will successfully implement change, the people who make up the company need to be on board and accept the change. If employees reject the changes, the organization will be slowed and will not likely meet their expected outcomes. "People rarely change their behavior much because they have seen a 64-point PowerPoint presentation," he argues. "They change because they are shown a truth that influences the way they feel" (Gray, 94).

8.5 Eight Steps to Change

There are several steps that are needed to institute change. Of course, a company cannot simply say: "let's change" and immediately the change is complete. A plan is needed and must be carefully executed by management in order to smooth the process. According to the Paul Cherrett and Michael Griffiths of the Burford Consulting Group, there are eight steps that must be accomplished to successfully institute change.

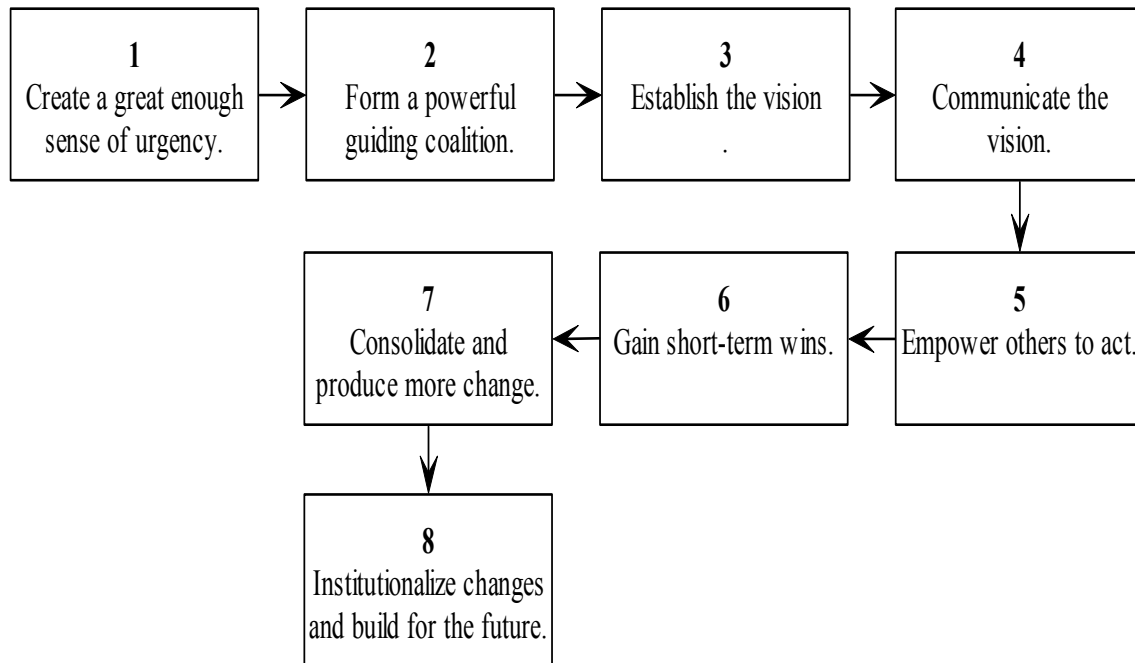


Figure 1: The “8-Steps” Model for managing change and transformation.

8.5.1 Step 1

The first step is to “create a great enough sense of urgency”. This is the initial step needed to begin the implementation. Companies and their employees are generally reluctant to change as it requires a significant amount of effort and resources that are difficult and costly to come by. If only a few people in management see a course of action as a necessity while the rest just shrug it off, the chances are good that the proposal will be passed over and the desired change will not come to light.

Leadership is an important component of this step. As Cherrett and Griffiths point out, “find leaders as well as managers – the latter thrive on stability but change is driven by leaders” (2003). This point is where the difference between a leader and a manager comes into play. Leaders are able to motivate people and appeal to their emotions and senses. If a sense of urgency and its supporting feelings is needed, then a leader will be able to generate it among his or her followers.

A manager, on the other hand, is able to keep the “troops in line”, so to speak. While the leader’s responsibility is to inspire and lead in general, the managers can make this happen. For instance, if a company were compared to an army outfit, the leader would be the officer, such as a lieutenant, where the managers would act more like sergeants. The managers help to keep the order of the group and the overall “working machine” running smoothly.

8.5.2 Step 2

Once a sense of urgency is instilled in the organization’s management, a “coalition” must be formed in order to push the change forward. Even if a company’s managers have the best intentions, there is nothing that is written in stone that says that all of these intentions will be the same. People are different and have different perceptions of things. These differences will result in a variation of conclusions. In this case, the variation of conclusions can consist of those who are in favor of change and those who are not.

In order to push change forward successfully, there must be supportive backing for it. Cherrett and Griffiths mention this with “by definition, change requires active members, catalysts, champions and role models outside the normal hierarchy” (2003). Organizations are made up of groups of people who function together. In order to be effective, change needs to be promoted and pushed by a group of people committed to it. It’s much more difficult to go it alone and it’s also difficult to push change with a group that is too small or underpowered to begin with.

8.5.3 Step 3

The third step is to establish the vision. Problems typically start out fairly vague and then come more and more into focus. A solid plan helps the focusing process and can also help gain the support of people to follow through on it. Without a plan, the solution to a problem is still murky and is unconvincing to other people. Just saying that something should be done is not enough. A well-planned out, intelligent course of action is required.

Plans are a tool of vision. Initially, a vision is required before a plan can be created, otherwise what would the plan be for? When discussing a course of action, most people are interested in the vision. The plan becomes more interesting as the conversation becomes more technical and after the vision is defined. Grasping a single vision is much easier than grasping a potentially complex plan that may have several sub-parts to it.

Without a sound vision, “there is no compelling statement of where everything is going” (Cherrett & Griffiths, 2003). This is one reason why companies have mission statements. They want to express their vision and also to convey what the company is striving for. This mission statement is supported by several plans that help make the vision happen as efficiently as possible. A mission statement is also a constant reminder to employees as to what they are working for.

8.5.4 Step 4

The fourth task is to communicate the vision. Now that the vision has been formed and the support of management has been gathered, it’s time to communicate this with the rest of the company’s employees. An effective way of doing this is to lead by example. There are usually company meetings, or “pep rallies” explaining how employees should be fired up about the change, but leading by example is just as important and probably more so.

Once employees see managers implementing the changes that support the vision, they can begin to see the end result and what the goal is. If employees just see managers talking about change and not taking any action, they begin to feel that the change is not as important as they’ve been told it is. This reasoning comes from the lack of action by the managers. If the manager isn’t working on it or focusing on it, it must not be that important to them so it’s not very important to the employees.

8.5.5 Step 5

Large change is very difficult to accomplish with one person. This is the reasoning behind why step five is so important. Step five recommends: “empowering others to act on the vision” (Cherrett & Griffiths, 2003). The main point behind this step is to empower or encourage employees to take calculated risks and use “non-traditional ideas, activities and actions” (Cherrett & Griffiths, 2003).

Thinking outside the box can be beneficial to a company. In a company that requires or promotes innovative products, encouraging employees to come up with unique techniques for meeting a vision or goal can be very useful. In fact, if a company does not come up with new ideas or more efficient ways to produce existing ideas, it will stagnate and eventually collapse.

Competition among firms is very intense in the present marketplace. This competition is the main reason for the development of newer, more advanced products. In order to produce these new products, innovative thinking, design, and management is needed. This need is the reason why managers push employees to come up with ideas that deviate from the norm of the industry.

8.5.6 Step 6

Step number six is “planning for and creating short term wins” (Cherrett & Griffiths, 2003). Corporations can be large entities and even smaller changes can require a significant amount of time - not so much to set in motion as it is to ripple throughout the company. The overall time to realize a vision increases significantly the larger a company is.

A trait that is common to many people is impatience. In order to maintain attention, people like to see results quickly. This includes everyone: managers, executives, planners, and employees in general.

Consider a scenario where a large company is attempting to institute a time-consuming change. As time progresses and little progress is seen by employees, interest in the project can drop off quickly.

In order to combat this kind of scenario, it is important to set short-term goals. These goals can offer a short-term drive for employees who like to see results. This also is a good opportunity to reward employees who are key in the success of these goals. Defined goals are also useful milestones for project backers who are interested in seeing the end result. If the end result is a marketable product, then it is very important to keep an interested audience by touting recent accomplishments.

8.5.7 Step 7

The goal of step seven is to “consolidate and produce more change” (Cherrett & Griffiths, 2003). This is an important step to follow through on a vision. A vision usually consists of several sub-parts contained within a master plan. These sub-parts can take a significant amount of time and effort to complete. After completing some pieces of the plan, the people who initially pushed the vision may tire of it or those who initially opposed it may again try to stop it.

This step can be used either defensively or offensively. Successful accomplishments made thus far can be used as a shield to ward off critics. Successful accomplishments can also be used to convince others that the plan is working and the vision can be accomplished as long as the company keeps pressing forward. As Cherrett and Griffiths mention, one of the key inhibitors here is “declaring victory too soon – premature celebration kills momentum” (2003). This momentum must be maintained to complete the rest of the components needed to fully realize the vision.

8.5.8 Step 8

The final step comes at the end of change. This step is “institutionalize changes and build for the future” (Cherrett & Griffiths, 2003). Once the steps required to implement a vision are complete, it’s important to maintain the vision. The company may be tired as a whole due to the hard drive to the finish line. At this point, the company is vulnerable to returning to its prior ways even after committing a lot of effort and resources to realize the final result of the vision. To resist this, it’s important to have a management group that is committed to following and enforcing the vision.

As mentioned, these eight steps are a concise road map to accomplishing change. Good change is something that takes a lot of effort to accomplish correctly. Bad change can happen through a lack of action or lack of awareness and can take much more effort to recover from than the effort required instituting better change.

8.6 The Five Phases of Formulating and Implementing Strategy

8.6.1 Phase 1: Strategic Intelligence Gathering and Analysis

The first phase of formulating and implementing strategy is strategic intelligence gathering and analysis (Appendix A). In this phase, an organization assesses the present and likely future trends of its markets, competition, and technology. In this phase, organizations also examine certain internal and external variables (Five-Phase Strategy Model, 2004).

The CEO must ensure that the team gathers accurate data. This requires focusing on the answers to the following questions:

- What are the key economic trends that could affect our strategy?
- What are the most significant trends in society for our business?
- What are the most relevant trends in government, politics, and legislation?
- What major technological trends could affect our future?
- What trends are likely to affect our customers and suppliers?
- What should we expect from our direct and indirect competitors, as well as any potential new competitors? (Freedman, p. 32)

The CEO must help the team to condense the data into a manageable size. The CEO must also identify issues for the team to address. The team then creates a summary that reflects the group's best insights. The team must also analyze and agree on the meaning of the information presented (Freedman, p. 37).

The strategic implementation team should draft a set of assumptions that will guide their thinking from this point onward. Based on their assumptions and implications, the team members need to use their best judgment to analyze potential problems and opportunities. They should use "what-if" scenarios to help anticipate the future and predict the organization's role in it (Freedman, p. 37).

The team also has to evaluate its own beliefs. Before the team can begin to formulate the strategy, they must review the validity of its assumptions and implications (Freedman, p. 37).

The following seven "ground rules" should be adopted in order for the strategic implementation team to gather and analyze data effectively:

1. Find the correct answers by asking the right questions.
2. Continually focus on the implications of the information for your corporation.
3. Build a framework of trust. A Framework of trust is essential to the strategic process. Try to have a team with members that do not withhold information.
4. Work hard to find common ground. Remember that areas of agreement are often powerful indicators of importance and relevance.
5. Flexibility and compromise are always in order. However, be sure to remain open to challenges.
6. Take risks, and trust your own and your coworkers judgment.
7. Trust the process.

(Freedman, p. 38)

This phase will take a lot of work, however if done well it will provide a solid foundation for the remaining four phases of strategy formulation and implementation.

8.6.2 Phase 2: Strategy Formulation

The second phase of formulating and implementing strategy is the actual act of strategy formulation (Appendix A). Based on the outputs of the first phase, the team examines alternative futures and then selects and creates the strategic vision. The strategic vision is developed upon the organization's strategic timeframe, basic beliefs and values (Freedman, p. 43).

A defined timeframe is the basis for measuring organizational and employee performance against the organizations strategic objectives (Freedman, p. 45). The organizations timeframe is subject to review and modification as the process goes forward. Its primary purpose is to provide a parameter for strategic deliberations, and a reference point for measuring progress toward strategy implementation (Freedman, p. 47).

Basic beliefs are not only crucial to successful strategy implementation, but they also help to align the organization's communications, culture, and practices with its strategic vision (Freedman, p. 48). Basic beliefs are a very important part of implementing strategy because they set boundaries for day-to-day decision-making and help to reinforce strategic unity (Five-Phase Strategy Model, 2004). Basic Beliefs also support desired performance levels by establishing standards for accountability (Freedman, p. 49).

Basic beliefs must be:

- Universal, and apply to everyone in the organization.
- Realistic.
- Clearly stated and easily understood.
- Measurable.
- Demonstrable so that everyone can see them "in action".
- Consequential, because if an organizations basic beliefs have no impact on its decision making, they are worthless. (Freedman, p. 52).

Once the organization has set its timeframe and established its basic beliefs, it is ready to identify the company's driving force. The driving force is the primary factor that decides the products and services the company will and will not offer, and the markets it will and will not serve (Tregoe, 1990).

8.7 Every organization has at its strategic core one of eight driving forces:

8.7.1 Products or services offered

Organizations with a products or services offered driving force provide a limited range of products to an unlimited market (Tregoe, p. 57). Customers of a products or services offered organization view their products or services as superior, or not available from the competition. This differentiation might be based on uniqueness, price, value, packaging, quality, or a combination of these characteristics. As a result, the company will continually launch product improvements, modifications, upgrades, and increase its product line. (Freedman, p. 58).

The competitive advantage of a Products Offered firm is derived from its product differentiation, which lies in both the real benefits delivered and in end-user perceptions. The company's product differentiation must be both distinctive and superior to its competitors in order to sustain or increase market share. The key capabilities a Products Offered organization exploits to maintain its competitive advantage are most often related to product research, product development, sales, and distribution (Freedman, p. 59).

8.7.2 Markets served

The second driving force is Markets Served. While a Products Offered organization provides a limited range of products to an unlimited marketplace, a Markets Served organization does the opposite. These companies build a strong relationship with a clearly defined group of customers (Tregoe, p. 63).

The competitive advantage a Markets Served enterprise enjoys is achieved through its superior relationship with its chosen market. When it succeeds, it increases customer loyalty, and company and brand identification. The key capability of a Markets Served company is the ability to focus on creating this type of loyal customer base. Such a company actively assesses customers' needs through market research, and seeks to match these ever-increasing needs with a wide range of products (Freedman, p. 59).

8.7.3 Low-cost production

The third driving force is Low-Cost Production. The type of organization offers a limited range of products (Tregoe, p. 65).. The organizations focus is on their ability to manufacture goods at a lower cost than its competitors. The key capabilities are related to production processes, skills, and investment in equipment and similar services (Freedman, p. 61).

8.7.4 Operations capability

The fourth driving force is Operations Capability. A firm pursuing an Operations Capability driving force has a set of capabilities which, when used in different combinations, produces a wide range of products or services (Tregoe, p. 71). Its competitive advantage lies in their superiority within the market (Freedman, p. 63).

8.7.5 Method of sale and/or distribution

The fifth driving force is the Method of Distribution or Method of Sale. These two similar driving forces utilize their logistical, distribution, and sales capabilities, as well as their human and systems resources needed to their advantage (Freedman, p. 62).

8.7.6 Technology

A sixth driving force is Technology. A company pursuing this driving force focuses its vision around a body of knowledge, or a set of capabilities that enable it to develop new technologies or enhance existing ones (Tregoe, p. 72). Its key capabilities are research and development. Its competitive advantage is their development, acquisition, and management of unique and superior technological expertise, and its application to the technological products (Freedman, p. 62).

8.7.7 Natural resources

The seventh driving force is Natural Resources. Such an organization owns or controls a portion of one or more of the world's natural resources. It may make functional products for direct sale to consumers, or sell its resources to intermediaries for use as raw materials. The competitive advantage of these companies lies in the quality, quantity, location, form, and cost of exploitation of the natural resources. (Freedman, p. 62).

8.7.8 Return on investment or profit

The last driving force is Profit. Initially, many CEOs are attracted to this force for a very obvious reason: Without good financial performance, all other choices are pointless. Profit is typically the driving force of highly diversified organizations. However, it is important to understand that the financial goals of a business are the result of its strategic vision, and not its principal reason for existing (Freedman, p. 63).

To choose the driving force an organization must first create a set of objectives drawn from the strategic intelligence. The organization now needs to rank these by their degree of relative importance since they will not all be of equal weight. Next a number of alternative future strategic visions will be developed based on three or four alternative driving forces. An organization must evaluate each alternative rigorously to discover the best choice (Freedman, p. 65). Selecting a driving force answers two decisive questions that face every organization (Freedman, p. 75) :

1. What is the company's competitive advantage?
2. Which key capabilities will be required to capitalize on it?

At this point the team will have gathered so much information, it is time to stop and develop a strategic master project plan using all of the information gathered so far

8.8 Phase 3: Strategic Master Project Planning

The third phase of formulating and implementing strategy is strategic master project planning (Appendix A). There are a significant number of projects that must be completed to ensure that strategy is implemented effectively. Using sophisticated project management methods, the strategy implementation team can create a plan for how these projects will be completed (Five-Phase Strategy Model, 2004).

Strategic master project planning is similar to project management and has the following:

- A clear statement of the project's purpose and specific goals and objectives.
- Expectations about project on-time delivery.
- Scheduling.
- Resourcing.
- Cost performance assessment.
- Correct sequencing of projects.
- Quality and performance standards.

However, strategic master project planning is larger in scope and more ambitious than project management (Freedman, p. 118).

8.8.1 The purpose of the strategic master project plan is “four-fold”:

1. To assess the strategic initiatives that must be launched.
2. To integrate into the plan the existing operational projects that continue to be relevant.
3. To identify the projects that must be accomplished first.
4. To create a system for review and integration of additional projects that keep their implementation in line with the strategic vision. (Freedman, p. 119)

8.8.2 The strategic projects come from four areas:

The first area involves critical issues that pose a significant threat to the strategy's success. The projects that address critical issues are the first priority strategically (Freedman, p. 119).

The second area is the strategic vision, or what the organization will be like if the strategy is successful. The team must carefully review each component of the profile to identify the organizations current position and its ideal strategic position at the end of the strategic timeframe (Freedman, p. 121).

The third area that's likely to yield strategic projects is existing key operational projects that impact the strategy. Although these may have little to do with the strategy, they will compete for resources and management attention. As a result, they may affect the company's ability to implement strategy. Some will be integrated into the plan, while others will be discontinued (Freedman, p. 122).

The fourth and final areas likely to yield strategic projects are the internal and external influences. External influences include relationships with shareholders, customers, and suppliers, as well as the actions of competitors. Internal influences include the company's goals; the skills and knowledge of the workforce; the company's information and knowledge management; and the company's culture (Freedman, p. 123).

Based on the information gathered from these four areas, the team now gathers a potential pool of projects for the strategic master project plan. They will range widely in urgency, in importance, and in potential strategic impact. The team must prioritize them based on the impact and urgency of their results, as well as the resources that will be needed and the resources that are available. Ultimately, the team will rank the entire list of potential projects. The entire list of potential projects is the optimal portfolio. (Freedman, p. 124).

The strategy implementation team then starts at the top of the list and allocates resources to the highest-priority projects, and stops when there are no resources left. However, this does not mean that a lower priority project will never see the light of day. The team can move a lower ranked project ahead of one that consumes more resources, or it can choose to allocate more total resources to the overall plan. The projects that survive become the basis of the strategic master project plan (Freedman, p. 124).

8.8.3 To implement strategy, the organization should choose a systematic process that defines the project management discipline that should include the following five components:

1. A single project management discipline to be used throughout the organization.
2. Clarity in the definition of projects, as well as planning and execution.
3. Sufficient tools and methods for project resource planning, scheduling, and monitoring.
4. Awareness of the human side of project management; managing projects is about managing people.
5. A sense of balance between employees current job requirements and strategic project work. (Freedman, p. 128)

8.8.4 The strategy implementation team must focus on the following three key responsibilities to ensure that the plan will succeed:

First, the members of the team should remain involved as reviewers of the strategic master project plan. They monitor the progress of the plan, and approve the integration of new projects into the plan (Freedman, p 129). Second, the team is also the steward of the organization's resources, allocating both people and funds to the highest-priority projects (Freedman, p 129). Third, its members are the champions of the implementation itself, both as their ultimate sponsors and the principal communicators. The team's activities are the focal point for the organization's assessment of strategic progress (Freedman, p 129).

8.8.5 Phase 4: Strategy Implementation

The fourth phase: of formulating and implementing strategy is strategy implementation (Appendix A). One of the most important elements of a successfully implemented strategy is the quality of project execution. Every plan also requires a major communications effort and broad employee involvement. Throughout, the progress of each project is systematically reviewed, with modifications made as necessary (Five-Phase Strategy Model, 2004). There are three crucial aspects of the strategic master project plan:

1. Organization Structure:

A company's Organization Structure should be examined to ensure that it facilitates implementation. If it does, then it should be left alone. If it inhibits implementation, then restructuring is justified. The team must look first to the strategic vision for guidance. A vision statement pushes the association toward some future goal or achievement" (Drohan, 1999, p. 117). Selecting a structure should be considered with the same rigor as choosing a driving force. The selection criteria must be based on the strategic vision if the structure is to support implementation (Freedman, p. 124).

2. Strategic Information Management:

An organization's capacity for gathering, storing, retrieving, and managing strategic information plays a crucial role in its success. When information is optimized to support strategic activities, a company can gain an important strategic advantage. Winning organizations will harness their people, time, and capabilities to ensure the strategic dimension of information comes first (Freedman, p. 124).

3. Complexity:

The third and final aspect is reducing complexity of the relationship between products, customers, and profitability. Many companies make too many products in too many markets and this effort to be "all things to all people" can become a huge obstacle to implementing a new strategy (Freedman, p. 124).

The Rule of 50/5, like the well-known Pareto Rule of 80/20 (The Pareto Principle, 2004), describes the high cost of complexity (Appendix B). "The top 5 percent of the number of products sold in a given company typically account for at least 50 percent of the revenues" (Freedman, p. 144). "Similarly, the top 5 percent of a company's customers typically account for at least 50 percent of its revenue" (Freedman, p. 144). In most cases, reducing complexity will free up even more resources for the high priority projects that are crucial to the strategy (Shukla, p. 5).

To achieve success in strategy implementation, every organization must build a systematic approach to communicate its strategy throughout the ranks. Strategy should also be linked to the reward process (Tunnel, p. 17). Failure to do so is a death sentence for strategy implementation. The following questions should be asked help to determine if an organization embraces a culture that supports their strategy and operational objectives:

- Have you defined the culture you need for strategic and operational success? Does it support your strategy and business processes?

- Does your culture enable people to make their maximum contribution? Can they bring all of themselves to work?
- Does your culture attract and retain first-class talent? This is a big driver in terms of bringing in or driving off talent. (Brache, p. 5)

Employees must also be motivated and committed to change. The strongest support for implementation will be gained when everyone is given opportunity to understand, question, and embrace the strategic vision (Freedman, p. 155). Freedman lists the following nine “Golden Rules” To help communicate strategy:

1. Realize that the team carries the brunt of the responsibility.

The involvement of the CEO and the members of the strategic implementation is important and they should be part of as many communication channels as possible (Freedman, p. 170).

2. Stick together.

No matter what the good and bad parts of the strategy process may have been, the team must present an absolutely united front. Failure to do so invalidates the whole communication effort (Freedman, p. 170).

3. Rely on face-to-face communication.

On a topic as crucial as strategy, doubt and controversy are givens. When communication takes place on a personal level, any potentially misleading messages can be clarified on the spot (Freedman, p. 170).

4. Involve the supervisor or manager closest to the targeted individuals or groups.

To answer critical questions about how specific actions and behaviors will change, the person who will be responsible for monitoring those changes must be available to support the CEO or the strategic team leaders (Freedman, p. 170).

5. Know when to listen.

Every communication effort provides an opportunity for discussion. The potential lessons to be learned are too valuable to ignore (Freedman p. 170).

6. Skip the dazzle and focus on the message.

The purpose of communicating strategy can get lost in the attempt to package the message attractively (Freedman, p. 170).

7. Engage your audience.

“There’s an art to motivating people, and communication must be convincing if it is to persuade employees to change their behavior (Freedman, p. 171).

8. Connect every message with an action to be taken, or a plan to be implemented.

If your employees are expected to make changes, they need to understand how. (p. 171).

9. Remember that no communication is successful unless it answers the key question on the mind of everyone who receives it: What does this mean for me?

When you're asking individuals and groups to change their behavior work towards the strategic vision, they need to understand what you want them to do, and why (Freedman p. 171).

8.8.6 Phase 5: Strategy Monitoring, Reviewing and Updating

The fifth and final phase of formulating and implementing strategy is monitoring, reviewing, and updating the strategy (Appendix A). This phase includes the review of both internal indicators, such as progress towards strategic goals, as well as the review of external indicators such as the assumptions upon which the strategic vision was created (Five-Phase Strategy Model, 2004). Once the company's strategy has been implemented, there is still more work to do to ensure that it succeeds. It's crucial to monitor the health of a strategy at all times (Freedman, p. 178). There are four major questions that are vitally important to ask when it comes to continuously monitoring strategy (Appendix C):

1. Is our strategy working?

The strategy implementation team should be committed and involved in the review process (Freedman, p. 179).

2. Are our strategic assumptions valid?

The assumptions made about internal and external environments during the first phase of strategic intelligence gathering are the foundation on which every other component of the strategy rests. (Freedman, p. 182).

3. Are we implementing our projects on time and on budget?

The team must determine if its focus on certain products or markets has produced the desired results (Freedman, p. 185).

4. Do our decisions support the strategy?

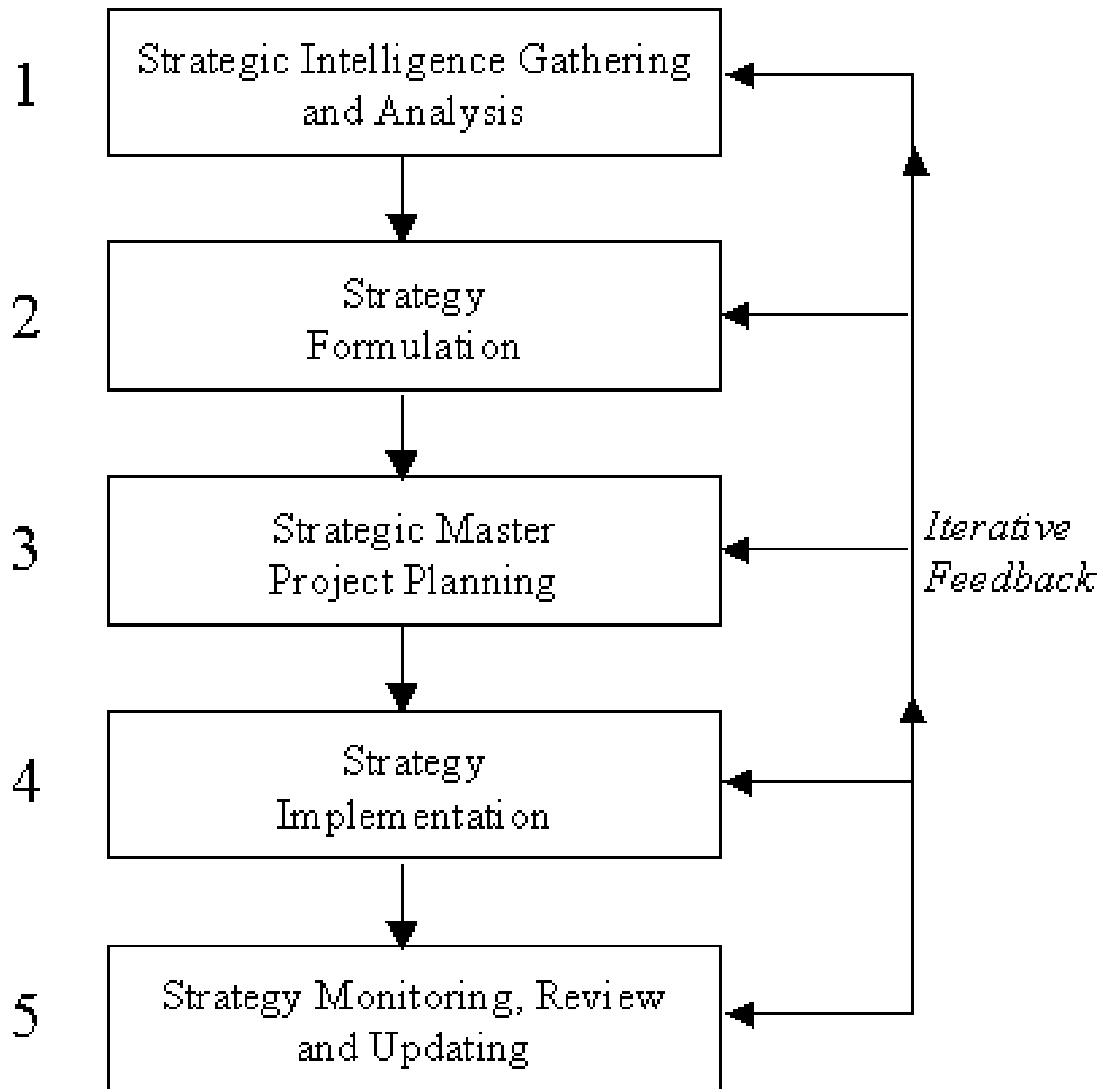
The strategic implementation team plays an important role in both influencing and monitoring the organizations decisions. The team must be watchful for employees who deviate from strategy. This behavior can undermine the success of the strategy (Freedman, p. 180).

8.9 Conclusion

In conclusion, change is inevitability in the world. Nothing can stay the same forever and organizations, whether they are corporations or not, are not immune to this. If a need to change is not caught quickly enough, the results could be disastrous. Of course, in order to implement change, there are several things that must be accomplished successfully. Cherrett and Griffiths have pointed this out with the 8-Steps method discussed above. These steps offer a concise road map to implementing change and reaching the desired final destination. The status quo is something that cannot be preserved forever. However and to a certain degree, when change does ultimately arrive, it can be harnessed and controlled. I enjoyed Freedman's book on implementing strategy. At only 218 pages, it is a wealth of information. The Kepner-Tregoe model of formulating and implementing strategy is a great guide for all organizations to follow. As the world continues to become more competitive and complex, continually monitoring and adjusting strategy is vital to an organizations success. By following the Kepner-Tregoe model of formulating and implementing strategy, organizations can successfully anticipate change and alter their strategies in advance to remain competitive in the global marketplace.

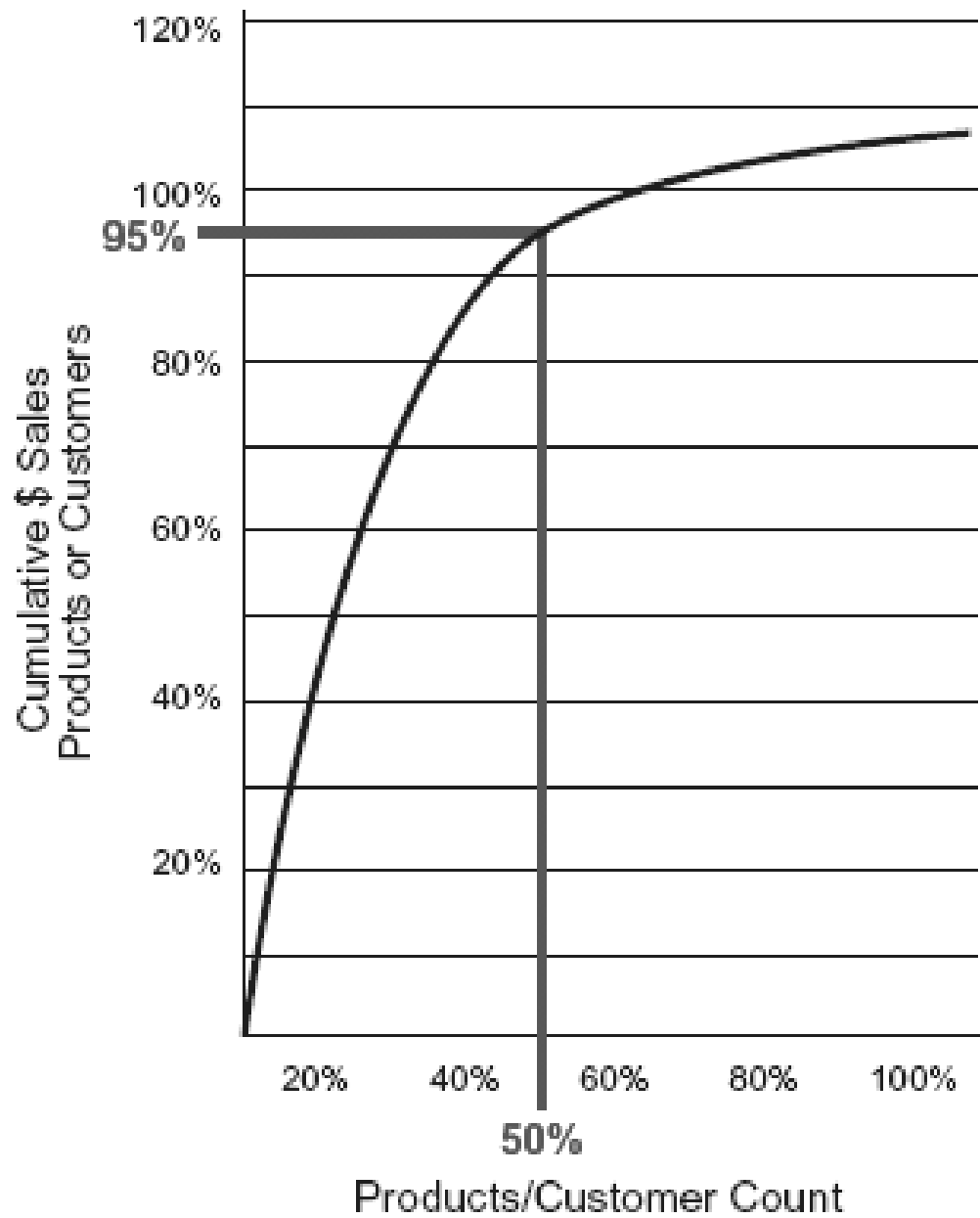
Appendix A

Five Phases Diagram



* Source: <http://www.kepner-tregoe.com/KTBooks/images/five-step.gif>

Appendix B
The Rule of 50/5



* Source: (Shukla, 2004, p. 3)

Appendix C
Strategy Monitoring and Updating Diagram



* Source: <http://www.tasc-taiwanasia.com/members/files/Mike%20Freedman%20presentation.pdf>

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