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## HOW NEW TOP MANAGERS USE CONTROL SYSTEMS AS LEVERS OF STRATEGIC RENEWAL

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*This research is a longitudinal study of 10 newly-appointed top managers; the research focuses on understanding (1) their business vision and strategy and (2) how they use formal control systems as levers of strategic change and renewal. The results reported in the paper are based on data collected over a period of approximately 18 months following the appointment of each new manager. Analysis of the data suggests that control systems are important levers used to manage both evolutionary and revolutionary change.*

*In situations of strategic change, control systems are used by top managers to formalize beliefs, set boundaries on acceptable strategic behavior, define and measure critical performance variables, and motivate debate and discussion about strategic uncertainties. In addition to traditional measuring and monitoring functions, control systems are used by top managers to overcome organizational inertia; communicate new strategic agendas; establish implementation timetables and targets; and ensure continuing attention to new strategic initiatives.*

How do top managers use formal control systems to formulate and implement new business strategies? Management control has been viewed historically as an important part of the strategy process. Yet, theoretical models of the relationship between strategy and the control process have evolved little since the 1960s when Anthony defined management control as the 'process by which managers assure that resources are obtained and used effectively and efficiently in the accomplishment of the organization's objectives' (1965: 17).

The strategy field has evolved dramatically since the 1960s. Notions of intended strategy have been augmented by concepts of emergent and incremental strategy (Mintzberg, 1978; Quinn 1980); strategic content has emerged as an

important focus for research (Miles and Snow, 1978; Porter, 1980, 1985); and, planning has been joined by learning as key variables in understanding strategy formation (Mintzberg, 1987). Notwithstanding calls for increased attention to the relationship between management control and strategy (e.g., Schendel and Hofer, 1979: 18 and 525), management control theory has yet to incorporate these advances. In a review of the strategic management literature, Huff and Reger note, 'how organizations use formal control, incentive, and information systems to implement strategy and how these subsequently effect performance are largely unexplored areas in strategy research' (1987: 221).

The current study was designed to understand *how* and *why* new managers use formal control systems as a means of implementing strategy. The tendency of newly-appointed managers to make changes to formal control systems has been noted in an earlier study of 14 new managers by

Key words: Control systems, management control, strategy implementation, top managers, organizational change

Gabarro (1987), which revealed that control systems changes were one of the most prevalent categories of change:

when a new manager's initial assessment showed that an existing system was inadequate in yielding the information needed to assess performance or diagnose problems, he typically responded by initiating changes in the system (or in some cases by implementing a new system) that would provide information. *Systems changes were made in all but one of the longitudinal cases during the first 3–6 months.* (Gabarro, 1987: 77; emphasis added)

New managers often bring with them new visions and strategies. How do these managers use formal control systems as levers for shaping and implementing their new agendas? By focusing on newly-appointed managers, the research design of this study attempts to capitalize on situations of change (of managers, strategy, and systems) as a way of exploring the causal relationships between strategy and control systems. The results reported below—which focus exclusively on top managers' use of formal control systems—describe only a subset of the actions taken by newly-appointed managers. Notwithstanding the limited scope of the study, the analysis suggests that the relationship between strategy and management control represents a significant research opportunity in the field of strategic management.

## A FRAMEWORK FOR CONTROLLING BUSINESS STRATEGY

For purposes of this analysis, I define management control systems as:

*the formal, information-based routines and procedures used by managers to maintain or alter patterns in organizational activities* (Simons, 1987a).

Several features of this definition are noteworthy. First, I am concerned with *formal* routines and procedures; informal control processes such as group norms, socialization, and culture are not considered explicitly in the analysis. Second, management control systems are *information-based* systems. Formal routines and procedures

that do not convey information (internal accounting controls, for example)<sup>1</sup> are excluded from my analysis. Third, the objective of management control systems is to maintain or alter *patterns* in organizational activities. Desirable patterns may include not only goal-oriented activities, but also patterns of unanticipated innovation and experimentation. Management control systems must accommodate deliberately intended strategies as well as incremental strategies that emerge in various corners of the organization.

Earlier studies in this research program suggest that management control systems can be clustered usefully into four different types of formal, information-based systems according to their (1) relationship to strategy and (2) use by top managers.<sup>2</sup> The four types of management control systems are:

*Beliefs systems:* formal systems used by top managers to define, communicate, and reinforce the basic values, purpose, and direction for the organization. Beliefs systems are created and communicated through formal documents such as credos, mission statements, and statements of purpose. Analysis of *core values* influences the design of beliefs systems.

*Boundary systems:* formal systems used by top managers to establish explicit limits and rules which must be respected. Boundary systems are stated typically in negative terms or as minimum standards. Boundary systems are created through codes of business conduct, strategic planning systems, and operating directives provided to business managers. Analysis of *risks to be avoided* influences the design of boundary systems.

*Diagnostic control systems:* formal feedback systems used to monitor organizational outcomes and correct deviations from preset standards of performance. Diagnostic control systems—

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<sup>1</sup> Internal accounting controls are designed to safeguard assets and ensure data integrity. In the hierarchy of formal controls, internal accounting controls are the most basic building block. I have excluded these controls from my analysis because these procedures typically regulate detailed tasks and contain little information of importance to managers. Before more sophisticated management control systems are implemented, however, we assume that adequate internal accounting controls are in place.

<sup>2</sup> These concepts are elaborated in Simons, 1987b, 1990, 1991a, 1991b, and 1992.

exemplified by business plans and budgets—are the prototypical feedback systems used to track variances from preset goals and manage by exception. Analysis of *critical performance variables* influences the design of diagnostic systems.

*Interactive control systems:* formal systems used by top managers to regularly and personally involve themselves in the decision activities of subordinates. Any diagnostic control system can be made interactive by continuing and frequent top management attention and interest. The purpose of making a control system interactive is to focus attention and force dialogue and learning throughout the organization. Analysis of *strategic uncertainties* influences the design of interactive systems.

Table 1 summarizes the basic features of the four categories of management control systems. Collectively, these four categories of control systems comprise the framework for controlling business strategy illustrated in Figure 1.

## RESEARCH DESIGN

### Sample

The sample for the study comprises 10 newly-appointed top managers (i.e., presidents of businesses reporting either to a board of directors or, if a diversified firm, to parent company executives). These individuals were selected by scanning the *Wall Street Journal* and the *New York Times* business sections for announcements of executive change. Each manager was approached immediately upon the announcement of their appointment and asked to participate in the study. Agreement to participate was readily forthcoming: with only two managers declining, 12 requests to participate in the study yielded the desired sample of 10 newly-appointed top managers.

The sample was split intentionally to include five managers who were promoted from within the organization and five who were recruited externally. This split was designed to capture differences that might arise according to an individual's familiarity with the organization and mandate for change. Past research (e.g., Wiersema, 1992; Helmich and Brown, 1972) suggests that insiders and outsiders may vary in

the degree of organizational change that is implemented following their appointments.

The 10 managers and their organizations are described in Table 2. The size and nature of the organizations these managers lead varies significantly, but, as I shall describe below, the way each used management control systems to support and drive change was remarkably similar.

### Longitudinal data collection

The research plan was designed to track the evolution of strategic change during the first 18 months of each new manager's tenure and their use of formal management control systems during the same period. During the start-up phase of the study (i.e., the first 10 months), new managers were interviewed for the first time and introduced to the purpose of the study. Participants agreed to be interviewed and supply other data at four month intervals to document their agendas, action plans, and use of formal systems. Subordinates were also interviewed to help interpret the nature and magnitude of change.

Interviews, which were typically one and one-half to 2 hours in length, were based on semistructured interview schedules intended to gather data on evolving competitive environments, market positions of key competitors, historical performance of the business, past and intended business strategy, and directions for the future. Data on personal background, experience, and the reasons for top-level succession were collected. Organizational changes in strategy, structure, process, and key managers over the 18-month period were documented.

During interviews, additional data including copies of formal documents relating to planning and control system design and use were gathered. In addition, public data were gathered for the period including business press coverage, analysts reports, and annual reports.

Particular emphasis was placed on understanding how newly-appointed top managers used management control systems as levers of change. Over the 18-month period, top managers and subordinates were asked repeatedly to describe how and why formal control systems were used: How much time was allocated to each system? How and why did the focus of attention change over time? Where did the initiative for change originate? Who participated in substantive issues

Table 1. Characteristics of four categories of management control systems used by top managers

	Beliefs systems	Boundary systems	Diagnostic control systems	Interactive control systems
Nature of system:	Explicit set of shared beliefs that define basic values, purpose, and direction	Formally stated limits and rules that must be respected	Feedback systems used to monitor organizational outcomes and correct deviations from preset standards of performance	Control systems that managers use to regularly and personally involve themselves in the decision activities of subordinates
Purpose:	Provide momentum and guidance to opportunity-seeking behaviors	Allow individual creativity within defined limits of freedom	Provide motivation, resources, and information to ensure important organizational strategies and goals will be achieved	Focus organizational attention on strategic uncertainties and thereby provoke the emergence of new initiatives and strategies
Key design variables:	Core value	Risks to be avoided	Critical performance variables	Strategic uncertainties
Examples:	<ul style="list-style-type: none"> <li>— Mission statements</li> <li>— Vision statements</li> <li>— Credos</li> <li>— Statements of purpose</li> </ul>	<ul style="list-style-type: none"> <li>Clear rules, limits, and proscriptions in:           <ul style="list-style-type: none"> <li>— codes of business</li> <li>— conduct</li> <li>— strategic planning</li> <li>— capital budgeting</li> <li>— capital systems</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>— Profit plans and budgets</li> <li>— Goals and objectives systems</li> <li>— Project monitoring systems</li> <li>— Brand revenue monitoring systems</li> </ul>	<p>Top managers can make any control system interactive by:</p> <ol style="list-style-type: none"> <li>(1) ensuring that system is an important and recurring agenda to discuss with subordinates</li> <li>(2) ensuring that system is a regular focus of attention by operating managers throughout the organization</li> <li>(3) participating in face-to-face meetings with subordinates</li> <li>(4) continually challenging and debating data, assumptions, and action plans</li> </ol>

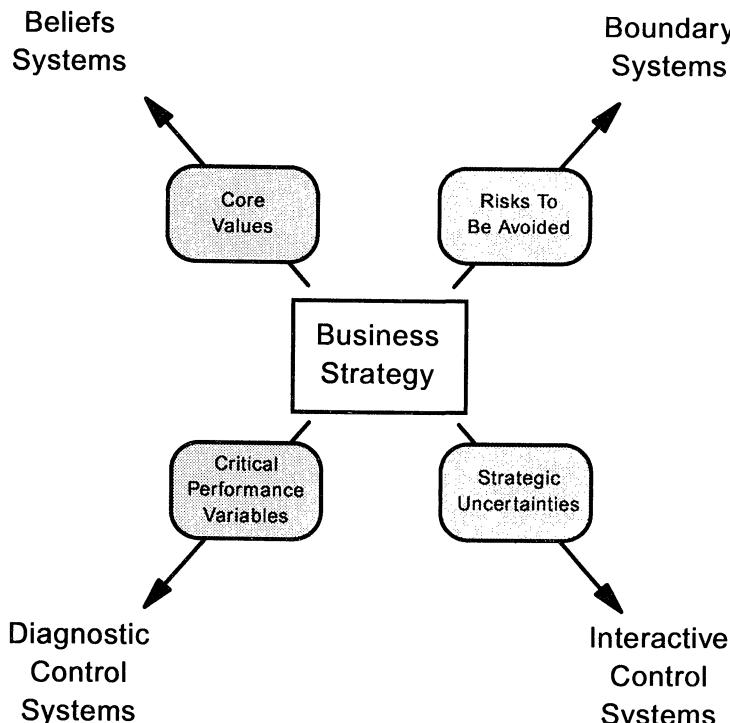


Figure 1. Controlling business strategy: Framework for analysis

such as goal setting, incentive compensation formula, development of new missions and strategies, and planning guidelines and targets? What was the pace and order of these interventions? What were the results of these interventions? What was the respective role for top managers and staff groups in these processes? What aspects were delegated and what aspects were handled personally by top managers?

When the study was approximately 70 percent complete, the data were analyzed for patterns and trends in management control systems use among the 10 top managers. Sorting of individual actions was conducted using the framework presented as Figure 1: how did managers use, and what changes were made to: (1) beliefs systems; (2) boundary systems; (3) diagnostic control systems; and (4) interactive control systems. This initial analysis was used to generate a series of propositions that was subsequently refined as the stages of the study progressed.<sup>3</sup>

<sup>3</sup> Due to the time involved in identifying potential participants, arranging initial interviews, and securing agreement to participate, the 10 managers joined the study at the rate of

Then, when the data collection was complete, the entire data set was reanalyzed to discern patterns in management control system use in the 10 businesses included in the sample. A draft report was sent to all 10 participants with a request that each review the analysis for accuracy, possible misinterpretations, and omissions. Five of the 10 managers returned detailed comments, indicating they were in substantive agreement with the analysis.

approximately one participant per month over the 10-month start-up stage. Then, during the 16-month data collection stage, these managers were interviewed every 4 months. Thus, at any point in time, interviews at different companies focused on managers with varying lengths of tenure in their new positions. This staggering of the data collection allowed tentative propositions to be developed based on data collected from managers who had joined the study early and then tested against data collected from managers who had joined the study later. A progress report of the tentative findings, compiled when the study was two-thirds complete, was presented at the 1991 Strategic Management Society annual meeting in Toronto, October 23-26.

Table 2. Description of newly-appointed top managers and their businesses

Business	Unit revenues (millions \$)	Title	Immediate superior	Insider (I) or Outsider (O) to Organization
Computer manufacturer	2,000	President	Parent company executive	I
Bank	2,000	President	Parent company executive	I
Can manufacturer	4,000	President	Parent company executive	O
Machinery manufacturer	350	President	Parent company executive	I
Food manufacturer	400	President	Parent company executive	O
Branded consumer products	6,000	President	Board of directors (and retiring CEO during transition)	I
Electric utility	1,800	President	Board of directors	O
Health aids	600	President	Board of directors	O
Paper manufacturer	2,800	President	Retiring CEO and board of directors	O
Retail manufacturer and merchant	2,700	President	Board of directors	I

## RESULTS

### Management control systems as levers of strategic change and renewal

'Systems is our most critical gap. Without proper systems to integrate the data, it will be very hard to make our strategy work.'

All 10 managers in the sample used management control systems actively to promote and support strategic change. In content analyzing the control systems usage patterns of the 10 participants, however, the sample bifurcated into two distinct clusters: the attribute that differentiated the two clusters was the *mandate for change* perceived by each of the newly-appointed managers.

The first cluster, which consisted of four

managers, perceived that their role was to act as a driving force for fundamental, revolutionary change: these managers and their organizations were classified as the Strategic Turnaround cluster. The other 6 managers were taking over situations that, they believed, required some evolutionary change, but must be concerned primarily with maintaining the success and momentum of the business: these managers and their organizations are classified as the Strategic Evolution cluster. Table 3 illustrates the history and strategic success of each firm which, in turn, created the strategic mandate for each newly-appointed manager.

One expectation, reflected in the research design, was that managers hired from outside the firm would be more likely to institute revolutionary change than internally promoted managers. The data from this sample of 10

Table 3. Strategic history of sample companies

	Results of past strategy	Past top manager	New top manager
<b>Strategic turnaround cluster</b>			
Computer manufacturer	Unsuccessful niche strategy; market failure and heavy losses	Terminated	Internally promoted
Bank	Unsuccessful diversification; bad loans and heavy losses	Terminated	Internally promoted
Food manufacturer	Stuck in the middle; potential unexploited	Terminated	Outsider
Health aids	Franchise eroded; failed diversification	Terminated	Outsider
<b>Strategic evolution cluster</b>			
Can manufacturer	High volume, low cost market leader	Left following corporate acquisition	Outsider
Machinery manufacturer	Market leader in niche	Retired	Internally promoted
Branded consumer products	Market leader with strong brand franchises	Still chairman; in transition	Internally promoted
Electric utility	Innovative monopoly in regulated environment	Died unexpectedly	Outsider
Paper manufacturer	Market leader in niche	In transition	Outsider
Retail manufacturer/merchant	Market leader in niche	Still chairman; in transition	Internally promoted

managers did not support this conclusion. Two of the four managers in the Strategic Turnaround cluster were external hires; two were promoted internally. Similarly, of the six managers in the Strategic Evolution cluster, three were external recruits and three were internal promotions.

#### *Cluster 1: Strategic turnaround*

'Time is what keeps me awake at night. We have burned our currency. We abused our marketplace. We let them down on expectations and delivered a poor quality product.'

Four of the top managers in the sample were attempting to engineer revolutionary strategic change in their businesses. In each case, these managers were redirecting the basic strategy of the business.

In three of the four businesses, the mandate for change was provided by the failure of past strategies. Recent attempts to build new niche

markets, expand geographically, or diversify into new product markets had failed, leading to significant financial losses. Three of the newly-appointed managers were replacing the outgoing managers responsible for the failed strategies. In the fourth business, the new top manager had been hired externally by a corporate parent which had recently acquired the business: the mandate for this manager was to provide new strategic focus and build up the scale of a business that had been underperforming.

Managers of turnaround situations are typically under significant pressure to improve performance (Gabarro, 1987: 51). Because of the urgency of the mandate for change imposed by superiors (either a board of directors or the corporate executives of a diversified corporation), these four newly-appointed top managers perceived that if short-term problems were not successfully overcome, they would not survive the long-term (as the CEO of an international conglomerate told one of the newly-appointed top managers

in this study, 'welcome to the fast lane. But you should know that if you don't keep accelerating, you will be run over').

The four newly-appointed top managers each spent the first several months appraising opportunities for the business. Little substantive change was implemented during this period, although the scope of review was far ranging and intensive. These managers wanted to see and read everything possible; they travelled extensively to visit various business locations and met frequently with subordinates, suppliers, and customers. All four of the managers initiated in-depth economic analyses during this period to better understand strategic options. Three managers created in-house consulting task forces to analyze markets dynamics, competitive threats, and potential opportunities. One manager used external consultants to develop data bases to analyze markets, test against organizational capabilities, and perform competitor analyses (Gabarro, 1987: 20-24 discusses this orientation/evaluation stage in detail).

During this short period after taking charge (3 months), little change was made in the design or use of formal systems.

*Use of management control systems in the first 12 months.* From content analysis of interview and other data, the short-term challenges perceived by newly-appointed managers attempting strategic turnaround revolve around three urgent demands:

- overcoming organizational inertia
- structuring and communicating performance expectations
- gaining organizational allegiance to the new agenda

The use of formal systems played an enabling role in meeting all three of these demands.

*Using management control systems to overcome organizational inertia.*

'I keep telling my people that carrying on doing the same thing is unacceptable.'

The mandate for managers engineering strategic turnaround is to change the organization in fundamental ways. Yet, organizations possess considerable inertia that must be overcome if substantive change is to be introduced and sustained (Miller and Friesen, 1984, Chapter

10). Habit, standard operating procedures, and programs in progress all promote stable behavior patterns among longstanding groups (Hannah and Freeman, 1984; Nelson and Winter, 1982, Chapter 5). To implement a new agenda, managers must create momentum in a new direction; but first, old behaviors must be unlearned. (Argyris, 1985: 274).

One way that organizations can unlearn old behaviors is to replace key individuals whose behavior patterns do not fit the new strategy (Tushman, Newman, and Romanelli, 1987). All four newly-appointed top managers replaced direct subordinates in several key jobs (in three of the companies, for example, the chief financial officer, marketing vice president, and international vice president were all replaced). At the limit, however, previous behaviors embedded in the organization can only be unlearned by replacing the entire organization.

Another approach—used by all four managers attempting strategic turnaround—was to use beliefs systems and boundary systems to actively create impetus for the new, emerging agenda and to demarcate the domain for new strategic initiatives.

As the new strategy for the business became clear (within the first 6 months), all four managers personally drafted new mission statements for their businesses. These statements were written in the second 3 months of their tenure. The missions addressed core beliefs, target markets, and identified core product categories. The missions communicated, in very broad terms, the new top manager's agenda for the organization.

The new mission of one company, which had previously lacked focus and was now embarking on an ambitious global expansion strategy, was simply 'to firmly establish its brands as the world's undisputed leader in its various markets'. The new top manager of another company, in which a failed diversification strategy had allowed a strong brand franchise to erode, wrote a typical mission, reproduced as Figure 2.

These beliefs systems were intentionally vague so they could appeal to individuals at all levels of the organization. Mission statements were often couched in inspirational language to supply fresh energy and motivation to the organization (see Figure 2 as an illustration). As one manager stated, 'Growth is our number one goal, so we must inspire as well as manage'.

1. Our core business is the manufacture and sale of XXX. Our objective is to be the leading supplier of all types of XXX in each market we serve on a worldwide basis. We will exert great effort to expand the XXX category worldwide.
2. We will accomplish our share and market growth objectives through continuous improvement to our products and through product line extensions, utilizing innovative techniques of manufacturing, marketing, distribution and education that are appropriate to local conditions.
3. We will be the low cost producer in every market in which we compete, while maintaining our traditional high product quality. We will conduct all aspects of our business at a level that makes us burst with pride.
4. Diversification opportunities must build on our existing strengths and/or hold the potential for near-term profitability. Unless we can see a measurable benefit to our shareholders, we will not diversify. Rather, we will operate our basic business profitably for the shareholder.

Figure 2. Mission

Counterbalancing the positive beliefs systems was the use of formal boundary systems to specify what types of behavior would no longer be tolerated. In the most basic sense, all four managers made it clear through planning guidelines and other monitoring systems as usual—based on the prior strategy—would no longer be acceptable. More specifically, each manager tailored specific strategic boundaries. For example,

We will not undertake any activities that do not fit our four families of products.

We will not expend any resources on developing low fat products.

We will no longer offer period-end promotions to boost volume.

Profit—not volume—will be our creed.

These unambiguous boundaries, which were expressed forcefully by the new managers, precluded the pursuit of certain types of opportunities—many of which were acceptable under past management. Boundary systems, either as stand alone information systems or incorporated as part of planning guidelines, demanded that organizational participants unlearn past behaviors. Failure to comply would be considered a serious offence at a time when top managers were assessing which subordinates to retain and which to replace.

The inspirational beliefs and constraining boundaries, contained in formal documents such as missions and planning guidelines, were communicated personally and actively by each of the top managers. Each manager drafted documents and guidelines, wrote letters to all employees, prepared speeches and videotapes, and toured the business, conducting workshops and meetings with key subordinates around the country or the world. Staff groups were charged with monitoring compliance. Three of the four managers also, during this stage, issued formal documents transmitting the core values of the organization and codes of conduct. Managers referred to these as ‘Rules of the Road’ or ‘Corporate Value Statements’. These beliefs systems and boundary systems attempted simultaneously to inspire and constrain and, in the process, break organizational inertia.

#### *Using management control systems to structure and communicate performance expectations.*

In the first year after taking over, it was tremendously important to build credibility that I could deliver results on these critical performance variables. That is why the finance function became so important and powerful for me. [The Chairman] would not have trusted us to engage in the sort of investment we are undertaking unless my fiscal performance in the first 12 months that I took over this business had been flawless.

Between the fourth and the sixth month after taking charge, the top managers began a focused campaign to gain the support of relevant superiors—either a board of directors or an executive committee if a subsidiary in a diversified firm. Each of these managers recognized that their ability to alter the direction of the business depended on continuing confidence from their superiors (Warren, 1984).

All four managers attempting strategic turnaround used diagnostic control systems (i.e., formal measurement and feedback systems) to structure and communicate their agenda to superiors. Diagnostic control system goals (e.g., financial targets, market share targets, new business targets) were used to communicate the details of the proposed new strategic direction to the governance structure. One manager, for example, presented goals that would, over a 4-

year period, take the business into new geographical markets, increase sales from \$375 million to over \$1 billion, and increase net profit percentages from 12 percent to a range of 15 percent to 16 percent. These goals served as an explicit road map and justification for the new strategy.

Mission statements were presented, new strategies discussed, and measurable goals for the subsequent 4–5 years were offered up as personal commitments by the new top managers. Superiors (either parent company executives or a board of directors) did not demand that newly-appointed managers set accountability goals for themselves; yet, in every case, managers independently offered diagnostic control system goals to which they were willing to be held accountable. The purpose of these actions was to communicate, educate, signal commitment, and build confidence in the viability of the proposed strategic redirection.

To build and sustain their credibility with superiors, the achievement of these agreed objectives became tremendously important for the top managers in the sample. Access to adequate diagnostic control systems capable of monitoring critical performance variables became, therefore, a top priority for these managers. In three of the four firms, existing diagnostic control systems were inadequate for the monitoring needs of the new managers. In each of these firms, the new manager followed a dual strategy of (1) hiring consultants to design and implement new diagnostic control systems, and (2) recruiting a new chief financial officer to oversee the monitoring of critical performance variables. In these three firms, consultants installed new general ledger systems, order management systems, sales reporting systems, and profit planning systems.

In all four firms, top managers used diagnostic system goals to demand accountability from subordinates: new and existing diagnostic control systems were used to focus attention on the critical performance variables that would drive the new strategy. One manager referred to these as ‘pulse measures’; another instituted a formal ‘report card’ process for subordinates and key business functions. Diagnostic control systems used to monitor critical performance variables included monthly operating income reports by segment or business, cash flow statements,

store openings, and related variance reporting. Diagnostic system goals were quantitative, but not necessarily financial.

The active use of diagnostic control systems to build credibility through accountability (both upward and downward) followed immediately after the communication of beliefs and boundaries—typically after three months on the job. Each of the four new managers changed diagnostic control systems to better focus on critical performance variables within the second 6 months of taking over.

*Using management control systems to gain organizational allegiance to the new agenda.*

The culture here has always been, “If you make your financial targets, don’t worry about strategy.” I am now making it clear that if you don’t hit your strategy—even though you hit your budget—you will be penalized.’

The unwillingness of an organization to commit to a new strategy represents a serious potential impediment for managers attempting strategic turnaround (Greiner and Bhambri, 1989). To ensure commitment to the new agenda, the newly-appointed top managers in all four firms altered the remuneration and incentive system for key subordinates. As mentioned above, many key subordinates were replaced shortly after the new managers took charge. For the remaining senior managers, base salaries were increased significantly (this increase was necessary, in part, to ensure equity between the newly-hired replacements—who tended to be hired at higher salary levels—and existing managers).

In addition, bonus potential for key subordinates was increased to a larger and more significant percentage of total remuneration. Top managers were careful, however, to link bonus incentives, explicitly to the critical performance variables associated with the new strategy and monitored by diagnostic control systems (e.g., number of new store openings; client accretion; operating profits). The risk-reward function was also altered so that good performers would receive relatively more, and poor performers relatively less.

A large proportion (typically 50%) of bonus compensation was changed from quantitative, formula-based, objective measures to subjective

evaluation. This subjective portion of the bonus—awarded for effort in achieving personal objectives—would be allocated entirely at the top manager's discretion. By making bonuses subjective, the payout for each subordinate rested on the top manager's personal assessment of the extent of contribution, effort, and commitment to the new strategy. By making these changes, top managers attempted to capture organizational attention and allegiance.

*Longer term challenges.* The challenges facing each manager attempting to engineer strategic turnaround changed during the second 12 months. Support from superiors and senior levels of the organization was now in place. Subordinates who were unable or unwilling to commit to the new agenda had left. The concern of top managers now focused on gaining a deeper understanding of what was really required to achieve the strategic objectives that had been promised.

*Using management control systems to focus attention on strategic uncertainties.* Once the fundamentals of the business were in place in terms of mission, strategy, diagnostic control systems and related incentives, top managers focused their personal attention on one control system that became highly interactive. A control system becomes interactive when top managers use that system to personally and regularly involve themselves in the decisions of subordinates. When systems are used interactively, four conditions are typically present:

1. information generated by the management control system is an important and recurring agenda addressed by the highest levels of management;
2. the process demands frequent and regular attention from operating managers at all levels of the organization;
3. data are interpreted and discussed in *face-to-face meetings* of superiors, subordinates, and peers; and,
4. the process relies on the *continual challenge and debate* of underlying data, assumptions, and action plans. (Simons, 1987b: 351–352)

The interactive system chosen by each top manager focused organizational attention on the strategic uncertainties associated with that top

manager's vision for the future.<sup>4</sup> The installation of an interactive profit planning system at the health aids company was typical (and can be described as an illustrative example) of the process followed by other top managers attempting strategic turnaround. Under the old management, a brand revenue system had been highly interactive: the previous CEO received weekly reports that detailed product shipments and prices around the world. These data were used to promote debate and dialogue throughout the organization in an attempt to understand how levers of pricing, promotion, and packaging could be used to gain competitive advantage in various markets.

The new top manager wanted to redirect the strategy of the business away from mature product markets to inject more innovation in the firm's product offerings and marketing programs. This manager wanted operating managers to use a new profit planning system interactively to promote deeper understanding of market conditions, competitor actions, brand profitability, and the timing and effect of new product introductions. Brand revenue based on volume statistics would cease to be the interactive system of the organization.

To make these shifts in emphasis visible, the new top manager physically returned the weekly brand revenue reports to senders with the note that, although he expected them to monitor these variables (i.e., on a diagnostic basis), he did not wish to receive these reports any longer. The top manager and his new chief financial officer then, with the help of consultants, installed a new profit planning system that would allow managers throughout the organization to understand and monitor brand profitability. These data were then revised and discussed from the bottom of the organization to the top on a monthly basis. The top manager and the executive committee focused a great deal of attention on the new profit planning system and thereby sent a very clear signal throughout the organization about what strategic uncertainties the organization should collect data on and respond to.

Similar activity occurred in the other businesses

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<sup>4</sup> Strategic uncertainties are top management's perception of the contingencies that could threaten or invalidate the assumptions underlying the current strategy of the business. See Simons, 1991a.

in this cluster. The top manager of the bank set up an interactive control system to monitor, on a 6-week basis, client growth and revenue per client in target markets. An interactive brand revenue system with weekly reforecasting of anticipated growth and volume targets was installed at the food manufacturer. The computer company was in crisis and the top manager made multiple systems interactive. In each case, the new interactive control system allowed top managers to focus organizational attention on the strategic uncertainties related to their new strategy.

Through the debate that these systems fostered, new strategies would emerge that top managers counted on to allow the organization to achieve its mission. Managers participated actively in face-to-face meetings with subordinates to discuss both new data generated by the interactive control system and resulting action plans to preempt emerging threats and opportunities.

*Revision to strategy and control systems.* During the second year after taking over the business, the vision, strategy, and formal control systems were refined and reinforced. Substantive refinements to the strategy in this period included, for example, an acknowledgement of the changing role of certain distribution outlets, better market segmentation, the introduction of new products, the sale of peripheral businesses, and the announced intention to expand into new geographical markets. Many of these changes had emerged from the learning provided by the interactive control systems. In three of the firms, a second round of vision meetings were held with top managers to reaffirm and refine the vision in light of the emerging adjustments to the strategy. For example, the food manufacturer added a new product category to its mission statement after the successful testing of this idea in several test markets. Two of the firms reissued their value statements during this phase.

Diagnostic measurement systems were also refined based on performance and experience over the preceding year: additional measurement categories such as quality were added; the budget process was refined and streamlined; new systems were installed or integrated; executive information systems and relational data bases were tested; standard cost systems were installed; and targets were adjusted. Throughout the period,

top managers used newly-created diagnostic systems to demonstrate their progress in achieving critical performance variable goals.

### *Cluster 2: Strategic evolution*

'If you are coming in on the heels of success, it's harder to get change. You have to let them know you admire and appreciate the past success and that you understand the elements of that success. But you have to set up processes so that they can conclude that the changes you want are necessary.'<sup>5</sup>

In contrast to the managers attempting strategic turnaround, 6 of the 10 newly-appointed managers in the sample were taking over generally successful businesses. Three were replacing retiring managers; one was hired as a replacement for the soon-retiring CEO; one was filling a vacancy created by the accidental death of the past CEO; and one was brought in as part of an acquisition by a new parent company. These managers had not been provided with an explicit mandate for change by superiors (either the board of directors or corporate officers of a diversified company): their mandate was to continue a trajectory of profitable growth. They perceived their mandate for change as evolutionary rather than revolutionary.

Because the top managers they were replacing were generally perceived as successful, the newly-appointed managers in this group were not in a position to criticize publicly the retiring managers or past strategy. Each of these managers recognized, however, that change and strategic renewal were necessary if the business was to continue its profitable growth under their leadership. Each perceived a high degree of urgency (and expressed personal anxiety) concerning their ability to continue to deliver high levels of financial performance in the face of rapidly changing product markets.

Four of the six managers conducted in-depth economic analyses during the first 3 months of their tenure to help them understand the strengths and weaknesses of the business. Three

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<sup>5</sup> William D. Ruckelshaus, chief executive officer of Browning-Ferris Industries, 'When Outsiders Get the Top Job', *The New York Times*, March 20, 1992, p. D1.

of the top managers hired strategy consulting firms to undertake specific analyses and projects. Each of the six managers intended to continue the basic trajectory of the business, but to shift the strategy in a direction he considered essential to successful competition in the decade ahead.

For this group of managers (three of whom had been promoted from within the organization and three of whom had been recruited externally), personal background and experience were important in defining the themes of strategic renewal. The new strategic agendas were ones managers were comfortable with based on past personal business experiences. The can manufacturer, for example, whose main functional experience had been in procurement, wished to refocus the supply side of the business through long-term upstream contracts and market alliances. The branded consumer company president, whose background included a term as president of an international subsidiary, wanted to introduce more emphasis on technology and roll-out domestic product lines to international markets. The paper company manager had previously been CEO of a well respected niche paper company and wished to inject more customer focus and marketing emphasis in the company. The machinery manufacturer, who had risen in the organization in relatively high technology businesses, planned to introduce more research and development focus to augment technology-based products. The electric utility president wanted conservation and other environmental concerns to be the cornerstone of the organization's new strategy. The retail merchant expressed desire to create synergy among its three disparate divisions.

*Use of management control systems in the first 12 months.* Analysis of interview and other data for managers classified in the Strategic Evolution cluster revealed three demands:

- forcing the organization to feel uneasy with current performance
- teaching the organization the agenda for strategic renewal
- testing to ensure that agendas were being altered to allow the implementation of new strategic directions

The use of formal control systems played a role in meeting all three of these demands.

*Using management control systems to generate uneasiness with current performance.*

'I am introducing a new common language focusing on: (1) earnings growth, (2) cash flow, and (3) return on capital employed. I am setting targets at 19 percent return on capital employed and 9 percent growth in our asset base. If a business cannot meet these returns, I will be asking why we should be funding that business.'

In taking over their businesses, one of the first actions undertaken by these managers was to begin verbally communicating their agenda for strategic renewal through speeches, newsletters, and audiovisual materials. As new strategic themes were being articulated to the organization and discussed, each of the six managers did the same thing: each established new financial control targets at more demanding levels.

Targets focused on variables such as profitability, asset utilization, revenue or earnings growth, and working capital. These diagnostic targets were generic and did not relate directly to the strategy of the business. Targets were set at demanding levels, however, and represented a significant increase in performance levels compared with previous time periods. This action served to dramatically increase performance expectations, confront complacency, and create a sense of urgency.

A primary vehicle by which newly-appointed managers reinforced a sense of urgency was through incentive compensation systems. Each of the six managers in this cluster adjusted incentive compensation to focus attention on the new diagnostic control systems targets.

Incentive compensation was changed in several ways. First, to the extent incentive payouts had been discretionary under the top manager, payouts were now based explicitly on formulas tied to performance against control system targets. Financial achievements, not effort, would determine bonuses. New quantitative targets in each of the firms related to accounting measures such as return-on-capital-employed, asset growth, revenue growth, and operating profit. In one firm, for example, bonuses had been entirely discretionary and awarded based on the previous top manager's subjective evaluation of performance. The new top manager changed the pay-out formula such that 75 percent of bonus was to be based on achieving preset quantitative targets

(return on assets and profit vs. plan) and only 25 percent based on the achievement of qualitative personal goals. The short-term, qualitative component of incentive compensation was linked explicitly to individual objectives that supported new strategic initiatives, e.g., new contracts, introducing technology, entering new markets.

Incentive formulas in two of the six firms explicitly calibrated performance against industry competitors. In one firm, no bonuses would be paid unless the firm was ranked in the top half of the industry in terms of return on equity; in the second firm, performance targets were established by reference to industry leaders.

Bonus formulas in these six firms were also altered to introduce a longer time horizon. Payouts would not only be based on financial performance in the current year, but also financial performance over a longer (typically 3-year) time period. One firm, for example, instituted a formula based on return-on-capital-employed and asset growth using a 3-year moving average to assign bonuses to its top 100 managers.

Like firms in the Strategic Turnaround cluster, top managers in the Strategic Evolution cluster placed great importance in having adequate diagnostic control systems to set and monitor performance targets. Four of the six firms in the Strategic Evolution cluster already had strong centralized diagnostic control systems in place and no further investment in systems was necessary. In the two remaining firms, however, diagnostic control systems were not adequate for the task: the top manager of one of these firms hired a new chief financial officer who was given the assignment of installing new financial measurement systems; the top manager in the other firm hired consultants to install new financial systems.

The effect of these changes was to heighten expectations, but more importantly, these changes seemed designed to force the organization to rethink the programs and strategies capable of achieving these results. Everyone in the organization realized that status quo behavior could not produce the expected improvements in financial performance that were now linked so tightly to incentives.

#### *Using management control systems to teach the new agenda for strategic renewal.*

"The business was superbly run tactically, but I

didn't like their strategy. So I brought them here for a week to talk about strategy. We came out with a list of eight strategic priorities. One of the priorities was to throw away the existing business plan and deliver a new one to me in 60 days.'

One problem for managers engineering strategic renewal is educating the organization about the strategic agendas that will be encouraged and supported. This education was done both informally and formally by the six new top managers. Informally, new strategic initiatives were a constant source of discussion. More formally, these strategic agendas were conveyed through formal planning guidelines issued personally by the top manager.

With one exception, these businesses all had basic diagnostic planning systems (e.g., business planning, profit planning) in place (in the business that was the exception, the top manager brought in consultants to design and implement basic systems); however, each of the managers changed or augmented planning to introduce greater importance and formality to the process. Typical changes included:

- introducing new planning processes (e.g., capital budgeting; strategic planning; technology planning)
- lengthening planning horizons to encompass additional planning years
- increased emphasis on overall product market strategies and reduced emphasis on financial detail

Each of these changes was introduced personally by the new top managers. Changing the focus, formality, and intensity of planning allowed top managers to influence the strategic issues that would receive organizational attention (Dutton and Duncan, 1987).

Top managers used the revised planning process to teach the organization the agenda for strategic renewal. Planning guidelines were prepared personally by the top manager to state explicitly the new strategic agenda. These guidelines required subordinates to respond directly to the new top manager by developing action plans relating to the new strategic themes. The top manager in one firm, for example, requested a 'road map' from subordinates that detailed how they would inject new technology in their businesses over the next five planning years. Other top managers also asked subordinates to

respond through the planning process with specific details as to how they would support specific strategic agendas.

*Using management control systems to test the organization.*

One change I am making is requiring managers to prepare a preliminary plan due by the first of October here at corporate. Last year, I asked people to develop highly detailed plans and they spent a lot of time doing analysis and preparing numbers and then, when they presented the plan to me, I realized that it was completely inadequate and threw the whole thing out. This ended up being terribly demoralizing. What we are doing this year is asking them to prepare a preliminary plan that states the direction they intend to take. The key is to test the strategy, the learning that is required in the business, and the estimated financials. This step allows me to take someone aside on an individual basis if their plan is way off the mark and it gives the two of us time to discuss what needs to be done to change the plan and make it more acceptable to me.'

Each of the six new managers changed diagnostic control systems processes to allow themselves the opportunity to test subordinates to determine if the themes of strategic renewal were incorporated in their implementation plans. Testing was often a catalyst for additional teaching and involved a high degree of learning for the organization—both about the substance of what the manager desired and about how to manage the process.

During the first attempt to respond as part of the annual planning cycle, many of the plans submitted to top managers were discarded as inadequate or pushed back for significant rework. In these cases, managers had failed the test of identifying new strategic initiatives that responded to the top manager's agenda of strategic renewal. These experiences were played out in review sessions that one top manager described as 'sweating exercises' and could be traumatic for subordinates. Failures to implement strategic agendas to the satisfaction of top managers resulted in one-on-one teaching/testing sessions where top managers explained repeatedly why plans were inadequate and what additional initiatives were required. Top managers also indicated that they used this process to size-up subordinates to determine

who was capable of the type of strategic change they valued.

'I sketched out the strategic plan for the business after I realized that if I asked them for it, all I would get would be a lot of numbers. I wrote it, gave it to them, and they rewrote it and gave it back to me. So I rewrote it again. We went back and forth four times. We spent 3 months agreeing on a plan that reflected what we are trying to achieve. We went through some hell to get it right, but we finally arrived at an eight page document that I was happy with.'

By the second annual planning cycle, both process and content had improved. Top managers often changed the process to request brief preliminary plans in advance of detailed plans. This intermediate step allowed more efficient testing of the general direction proposed by subordinates in response to strategic agendas. Also, the content of plans improved as the organization learned what types of initiatives supported the new agenda. Thus, by the second planning cycle, subordinates more easily passed the test.

Pressure to meet performance expectations can be high as a consequence of intensive goal setting exercises—especially when subordinates know that new top managers are evaluating their potential, and bonuses are linked by formula to results. During the period under study, subordinates in two of the businesses were discovered manipulating financial data to improve reported operating performance. In one company, this practice was particularly harmful because inventory and markdown decisions were being made based on inaccurate data.

In each case, the managers involved were fired. New boundary systems were imposed to ensure that this type of behavior would not reoccur. In one firm, new policies were issued ('Investigation of Fraudulent or Wrongful Acts by an Employee'), a new position of Ombudsman was created, and new reporting requirements were imposed on divisional controllers. In the other company, new procedures were implemented, audit staff was augmented, and reporting relationships were changed. As one of the top managers observed, 'some things you never tolerate. The ends don't justify the means.'

*Longer term challenges.* The challenges facing

each manager attempting to engineer strategic evolution changed during the second 12 months of the study. Expectations had been raised and the organization was beginning to comprehend the necessity of incorporating themes of strategic renewal into action plans. The concerns during the second 12 months of strategic renewal became similar to those of managers attempting more revolutionary change (although managers in the revolutionary cluster instituted similar systems changes sooner).

*Using management control systems to focus attention on strategic uncertainties.*

'I look at comparative sales daily for our retailing business and weekly for the others. In retailing, you can lose a million dollars in just one day. I use 'comp sales' as a gauge to what is happening in each of our businesses. It gives me a very quick way to know if business is up or down. More importantly, that information serves as a catalyst throughout the organization to get people out in the field to find out what's going on.'

Five of the six managers began focusing their personal attention on interactive control systems that would, over time, focus organizational learning on a set of strategic uncertainties in line with the direction the new managers wanted to take the business. New strategies would emerge from the process.

Two of the managers focused on strategic uncertainties related to the development and protection of new products and markets; these managers focused a great deal of attention on their interactive profit planning systems, which in turn focused organizational attention on changing customer needs and competitive new product introductions. One manager worried about fundamental changes in product technology that could erode the firm's ability to deliver low cost products; this manager focused on project management systems that collected data and analyzed current and potential technical product attributes. The fourth manager operated in a quasi-regulated market environment and monitored closely changes in the social and political environments through an interactive intelligence system. The fifth manager focused his attention on an interactive brand revenue system that supplied daily and weekly sales and volume

statistics that allowed the organization to focus learning on the impact of price, promotion, and packaging on customer buying patterns.<sup>6</sup>

*Control systems, attention, and performance*

To what extent were the actions of these ten managers appropriate and therefore visible in improved performance? Did the businesses represented by the two clusters prosper as a result of the choices made by managers in the sample? A relationship *should* exist between the management process variables of this study and business performance; however, intervening organizational and environmental variables make the measurement of performance relationships extremely difficult. Not only are the process choices subtle, but the *substance* of the strategy chosen by top managers (Porter, 1980, 1985) and past *resource commitments* of the firm (Ghemawat, 1991) are conditional determinants of success. Moreover, many of the businesses suffered the effects of a cyclical economic recession during the period of this study.

While economic performance effects cannot be calibrated easily, other dimensions of managerial effectiveness can be examined. First, however, it must be acknowledged that all 10 managers in the sample were accomplished executives. Each had been hired or promoted based on a proven track record of accomplishment. Thus, the consistency in the data concerning their use of management control systems within each cluster may not be surprising.

Analysis of the data revealed no significant variance in effectiveness among the managers in the Strategic Evolution cluster: all appeared to be successful in gaining support and implementing desired changes. There was, however, some variation in the perceived success of managers in the Strategic Turnaround cluster. As discussed earlier, new managers in both clusters had a vision of strategic change or renewal. Yet, support for change can be obtained only if subordinates believe that the top manager has a personal and deep commitment to the strategic changes that are being advocated. A powerful

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<sup>6</sup> See Simons, 1991a, for an analysis of the categories of management control systems that can be used interactively and relationship of these formal control systems to strategy and strategic uncertainties.

way to signal commitment is through periodic, personal involvement in key aspects of beliefs systems, boundary systems, diagnostic control systems, and interactive control systems. Managers in both the Strategic Evolution and Strategic Turnaround clusters, with two exceptions, seemed able to allocate sufficient attention to these processes over a continuing period to signal their interest and commitment.

Attention is a scarce resource that must be rationed (Cyert and March, 1963: 35). As Mintzberg (1973: 167–169) has shown, managers have many demands on their time. They must allocate their attention across multiple roles, performing tasks as figureheads, leaders, liaisons, monitors, information disseminators, spokesmen, entrepreneurs, disturbance handlers, resource allocators, and negotiators. Allocation of attention is an especially serious constraint for new top managers attempting Strategic Turnaround as each attempts to learn the business, deal with problems and crises, develop new agendas, and marshall resources to implement new strategies.

Two managers—both in the Strategic Turnaround cluster where attention demands are most acute—were perceived by some subordinates as insufficiently attentive to key processes. This lack of attention to process, notable in the second 12 months of their tenure, appeared to reduce the organizational commitment to strategic renewal. These managers were not allocating sufficient attention to management control processes to signal their own commitment. As a result, skepticism was voiced by some subordinates, and there was a perceived reduction over time in organizational commitment to the strategic changes advocated by these two top managers. Perhaps by coincidence, one of these managers resigned shortly after the completion of the study to take the position of chief executive of another firm; the other was promoted to the nonoperating post of chairman to make way for a new, younger chief executive. Their renewal attempts cannot be deemed failures, however, since each of their successors continued the basic strategy that the departing top manager had set for the business.

By the end of the study, all 10 managers were successful to the extent they were still in place and leading their businesses. One year after the completion of the study, however, only seven of the top managers were still in place: in addition to the two managers mentioned above who left

to assume new roles, a third manager in the sample was displaced by a merger and transferred to take on new responsibilities at another business within the same corporation.

## DISCUSSION

‘I have become an expert in the power of formal process and systems driving behavior. I believe that the finest managers are incredibly sensitive to these processes and their power.’

Management control systems are the formal, information-based routines and procedures used by managers to maintain or alter patterns in organizational activities. These systems are both pervasive and unobtrusive, but are rarely recognized as potentially significant levers of organizational change (for an exception, see Dent, 1991). Studies that have focused on newly-appointed top managers have noted that administrative systems play a role in the process of organizational change (Greiner and Bhambri, 1989; Gabarro, 1987: 180–181). In Gabarro’s study of new managers, for example, one of the strongest findings was the extent to which new managers made changes to information and control systems in the first year of taking charge. Yet, little is known about how or why these systems are used in these circumstances. The data collected in this study confirm the importance of formal management systems as levers of change, and suggest that management control systems are used consistently and actively by newly-appointed top managers.

Despite the diversity of businesses and industries represented in the sample, the way that managers used management control systems tools (within two distinct clusters) was remarkably similar. Both the mandates for change and the immediate challenges facing top managers differed for each cluster: yet, in each case, the use of management control systems was instrumental in advancing the agenda of these top managers (for analyses of the importance of top management agendas in managing change, see Kotter, 1982: 127; Bowman and Bussard, 1987, and Dutton, 1988).

Management control processes can, depending on the context, act as agents of both intended change and autonomous, emergent change

Table 4. Summary of formal control system usage patterns by newly-appointed top managers

Purpose	Strategic turnaround mandate	Strategic evolution mandate
<i>First 12 months:</i>		
1. Overcome organizational inertia	Formalize and communicate strategic boundaries ('thou shalt not . . .')	Link bonuses to financial targets
↓		Raise minimum performance levels for financial targets
2. Communicate substance of new agenda	Formalize new strategy and communicate through new mission statements (beliefs systems)	Issue planning guidelines to subordinates outlining new strategic initiatives
↓	Use diagnostic control systems goals as road map in presentations to superiors	
3. Establish implementation timetable and targets	Based on commitments made to superiors, fix accountability targets with subordinates	Use iterations of planning processes to test and teach new agenda
↓	Link diagnostic control system targets to announced strategy	Link diagnostic control system targets to announced strategy
4. Ensure continuing attention through incentives	Alter bonus incentives to be subjectively determined based on effort and allegiance to new strategic agenda	Alter bonus incentives to be formula-based and linked to new, more demanding financial targets
↓		
<i>Second 12 months:</i>		
5. Focus organization learning on strategic uncertainties associated with vision for the future	Begin using one control system interactively to signal priorities and motivate internal debate and dialogue	Begin using one control system interactively to signal priorities and motivate internal debate and dialogue

(Mintzberg, 1978; Burgelman, 1983, 1991). Table 4 presents a summary of the actions undertaken by managers attempting revolutionary strategic change and those attempting evolutionary strategic change. Regardless of their mandate for change, newly-appointed managers in both clusters used control systems to:

1. Overcome organizational inertia;
2. Communicate the substance of their new agenda;
3. Structure implementation timetables and targets;
4. Ensure continuing attention through incentives; and,
5. Focus organizational learning on the strategic

uncertainties associated with their vision for the future.

Organizational context and the urgency of the mandate for change often resulted in control system levers being used differently by managers attempting revolutionary change and those attempting evolutionary change. For example, managers in both clusters perceived a need to break old behavioral patterns and upset organizational inertia (Pettigrew, 1985: 462–463). Managers with a mandate for revolutionary change could declare the past strategies as failures and use strategic boundaries and new formal beliefs systems to set a new course. Managers taking over successful businesses, on

the other hand, were not able to criticize past strategies to create a catalyst for change; instead, these managers relied on demanding financial targets to create a sense of urgency and awareness that old behaviors would no longer suffice. Similarly, managers in both clusters altered incentives, but did so in different ways. The turnaround managers made bonus incentives largely subjective in an attempt to capture allegiance to the new strategy. The managers who were attempting more incremental, evolutionary strategic change linked bonuses by formulas to financial results.

In both clusters, the use of management control systems progressed through distinct stages that can be associated with systematic attempts to foster both learning (Argyris and Schön, 1978; Virany, Tushman, and Romanelli, 1992) and unlearning. In the strategic turnaround cluster, boundary systems promoted the 'unlearning' of old behavior patterns—a necessary condition for change. Beliefs systems were then used to provide a new frame of reference for the changes to follow. In the strategic evolution cluster, top managers used management control systems to teach and test the new agenda. Demanding diagnostic financial targets were used to heighten expectations and create a sense of urgency. Planning guidelines were then used to teach the agenda to which top managers wished the organization to respond; and, as follow-up, diagnostic goal setting and reviews were used to evaluate and test the organizational response. Later, interactive systems—'top management hot buttons'—were installed to generate the deeper learning associated with strategic uncertainties.

Other authors have likened the business leader to a teacher (e.g., Senge, 1990), but have tended to focus exclusively on the teacher as a facilitator and coach. The important role of testing and accountability has often been neglected. McDonald illustrates how testing is often a powerful tool for leaders attempting to shape the direction of organizations. She describes how Peter Ueberroth, then president of the Los Angeles Olympic Organizing Committee, tested his staff:

All new staff members are required to take a test administered by the President himself. The material to be tested includes "everything" about the history of the Olympic Games, current international and local news, and

infinite details about the LAOOC. . . . The test is as treacherous as promised, but studying for it does help quickly acquaint the newcomer to the organization and its environment. No one has been fired for not performing well on the "Peter test", but it is widely reported that Peter came down to personally congratulate the only person ever to have received a perfect score. (1988: 169)

Finally, management control systems appear to be vitally important in building credibility and selling a new strategy to various constituents. To implement strategy effectively, Hambrick and Cannella have argued that managers must, "sell, sell, sell the strategy to everyone who matters—upward, downward, across, and outward" (1989: 278). New top managers were consistent in the way they used management control system targets to communicate direction and create credibility with both superiors and subordinates.

Several cautions are necessary in interpreting the findings of this exploratory study. First, I have attempted to report only a small subset of the many actions that managers in the sample undertook to drive and support change. This study focused exclusively on the use of *management control systems* and was neither intended nor designed to capture the many other structural and process changes that were instituted by top managers. Second, the research design relies heavily on top management's descriptions of the actions they took and the espoused reasons for those actions. Although the actions and their effects were confirmed with direct subordinates whenever possible, the study did not attempt to delve deeper into the organization to assess the broader organizational implications of their actions. Finally, the data and analysis are purely descriptive: any inference about desirable managerial practice can be made only after considerably more research.

Management control systems focus attention, provide an underlying logic and language, induce public commitment, and create shared beliefs (Swieringa and Weick, 1987). Given the advances in our knowledge of the strategy process over the last 15 years, gaining a better understanding of the role of management control systems as levers for strategic renewal remains a largely unexploited research opportunity in the field of strategic management.

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