Pergamon

European Management Journal Vol. 14, No. 6, pp. 596–611, 1996
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S0263-2373(96)00056-4
0263-2373/96 $17.00 + 0.00

Effective Organizational Control: A Framework, Applications, and Implications

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This article by Eric Flamholtz provides a framework for understanding the nature, role, functioning, design, and effects of organizational control systems. It represents a model of control which can be used to make this process more visible in organizations. It illustrates the practical applications of the model, and suggests its implications for corporate and human resource management as well as for scholars.
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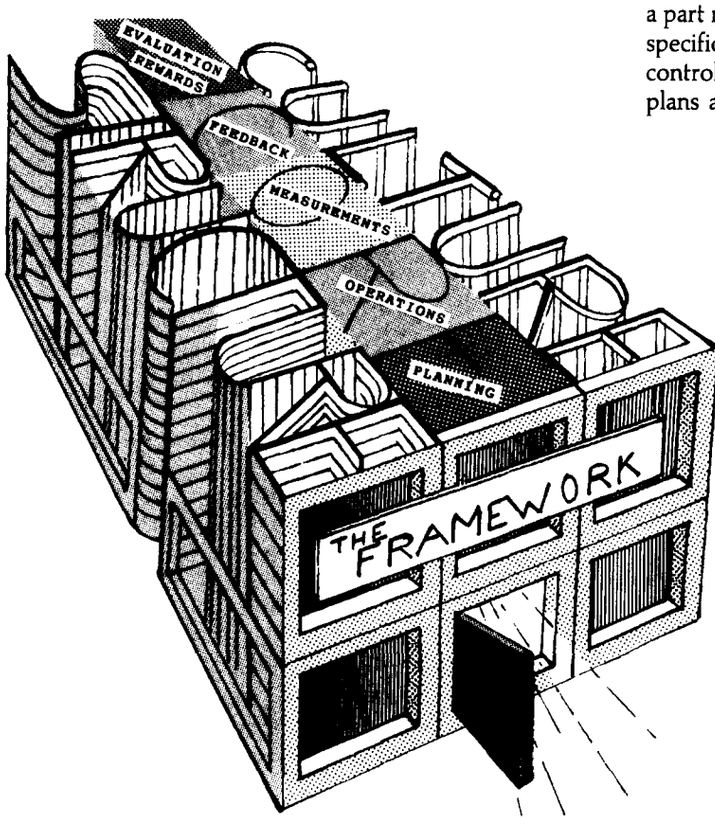

Introduction

All organizations (businesses, universities, governments, hospitals) are concerned with channeling human efforts toward attainment of organizational objectives. Regardless of their formal purposes, organizations are composed of people with their own personal interests. Even if these individuals and groups wish to help attain organizational goals, the organization of which they are a part must integrate their efforts and direct them toward specific goals. Thus, organizations must influence or control the behavior of people, if they are to fulfil their plans and achieve their goals.

To help gain control over the behavior of people in formal organizations, most enterprises use a combination of techniques including budgets, rules, standard operating procedures, job descriptions, budgets, accounting measurements, and performance appraisal systems. Taken together, these techniques are part of an invisible yet very real system: 'the organizational control system'.

Control plays a major part in the management of an enterprise, but unlike machines, equipment, finances, people, and even organizational structure, its role is often hidden from view. When we examine an organization's structure, we see it in the form of an 'organizational chart'. Unfortunately, there is nothing like this to help us visualize an organization's control systems. Thus organizational control and organizational control systems are ubiquitous but difficult to visualize; they are pervasive yet tenuous; they

are invisible, but have a significant impact on people's behavior.

Although control is a critical component of *any* system (human or mechanical), the area of management control has been relatively less developed than other management processes. Specifically, we lack an integrated conceptual framework to understand, visualize, and analyze control issues as well as to facilitate the design of new and/or redesign of existing control systems.

Purpose

This article deals with organizational control: its nature, role, functioning, design and effects. It develops the concept of 'control' as well as the notion of a 'control system'. It examines the elements of an organizational control system as well as the process of designing such systems. In brief, the basic purpose of this article is to examine this relatively neglected but indispensable aspect of management, and show how organizational control systems can play an important role as a component of the overall management process.[1]

We shall begin with some fundamental concepts and then present a framework for control, which, while somewhat complex, can serve as a powerful managerial 'lens'. We shall also present an actual case study of control in a US real estate firm in order to illustrate the uses and analytic benefits of the model. Finally, we shall present criteria for the design and evaluation of control systems. Although the article is addressed primarily to practising managers, it has implications for management theorists as well.

More specifically, we shall focus upon some key issues concerning organizational control:

1. What is the nature of control in organizations?
2. What are the managerial functions of control?
3. What is an 'organizational control system' and
4. How can organizations design and/or re-design control systems which influence behavior in desired ways?

These issues will be treated in turn.

The Nature of Control

The term 'control' is typically used in a variety of ways.[2] In this article, our concern is with organizational control, which is the process of controlling or influencing the behavior of people as members of a formal organization to increase the probability that they will achieve organizational goals.[3] It is assumed from the outset that control is stochastic and that total behavioral control is neither feasible nor desirable.

Managerial Functions of Organizational Control

Organizations require control because they consist of people with different interests, different tasks, and different perspectives. The efforts of people require integration and direction and this, in turn, creates the need for control. In the absence of a system for motivating performance toward organizational goals, people are likely to make decisions and act in ways that fulfil their own personal needs and goals, not necessarily the organization's. For example, managers have tried to build 'slack' (excess funds) into their budget to avoid being caught short and 'looking bad' to management, even though such slack is costly to their firm. A primary function of control systems is to overcome such behavior by creating a satisfactory degree of congruence between individual and organizational goals.

The larger the number of people in an organization, the greater the need for some form of organizational control mechanism. In relatively small entrepreneurial organizations, 'control' is exercised by the entrepreneur who can see what is happening on a day-to-day basis and make personal interventions. In large, complex enterprises, such as Ford, IBM, AT&T, Unilever, Nestlé, Philips, and General Electric, more sophisticated, formal mechanisms of control must be designed and used. However, these formal control systems must be designed with care in order to achieve the optimal degree of control; one which is neither too loose (which may lead to chaos), or too tight (which may lead to stifling bureaucracy).

Four Functions of Control

In order to motivate people to behave in ways consistent with organizational goals, control systems must perform four related tasks. First, they must be able to motivate people to make decisions and take actions which are consistent with organizational objectives. Without control systems, people take actions or make decisions designed to fulfil their own needs rather than the organization's goals. For example, the organization may be concerned with cost control while an individual is tempted to travel first-class. Next, control systems must integrate the efforts of several different parts of an organization. Even when people are trying to act in the organizations' best interests, they may find themselves working at cross-purposes. For example, a sales unit may want to offer a customer expedited delivery to make a sale, while from manufacturing's perspective, this may mean a 'rush order' which disrupts carefully designed production schedules and causes inefficiency. The third task of a control system is to provide information about the results of operations, and people's performance. This information allows the organization to evaluate results, while simultaneously permitting people to operate on a daily basis without having every decision reviewed. This is referred to as, 'autonomy with control.' The fourth

task of control is to facilitate the implementation of strategic plans. Each of these functions is described, in turn, below.

Goals emphasis
In all organizations, people must be motivated to focus on organizational goals.[4] On a daily basis, people make decisions which may or may not be consistent with organizational goals.[5] Ideally, the control system will cause people to focus on achieving the goals of the organization. This creates a state of 'goal congruence'.

Organizational integration
In all organizations, there is a need to integrate the efforts of people. Even in relatively small enterprises, those with sales of less than US$10 million, problems may be caused by a lack of coordination.

In some situations, the control process may consist merely of a series of meetings and periodic opportunity to assess progress against goals by oral or written reports. Carefully designed, this may be an adequate 'control system' for certain types and sizes of organizations.

In larger, more complex organizations, the problem of coordination may be much more. In corporations such as General Electric, Allied-Domeq, or Nestlé, with several different businesses, operating in several different nations, the effort required simply for coordination may be quite substantial.

Autonomy with control
Another reason for control systems is to permit the decentralization of day-to-day operations while simultaneously assuring that organizational objectives are achieved. This need has been recognized since the early days of this century. A classic example of this purpose of control was described by Alfred P. Sloan as a result of his experience in managing General Motors during the 1930s. Specifically, Sloan stated that the firm had established techniques of control over individual matters such as cost, inventory and production, but the fundamental issue of how to achieve optimal control remained:

How could we exercise permanent control over the whole corporation in a way consistent with the decentralized scheme of the organization? ... The means, as it turned out, was a method of financial control which converted the broad principle of return on investment into one of the important working instruments for measuring the operations of the divisions.[6]

The basic strategy was to permit managers to run their day-to-day operations as they wished, while evaluating the results of their decisions and actions in terms of the criterion of rate of return on investment. This permitted managers a great deal of autonomy, while still allowing top management to control the goals of the operating executives. It thus optimized, rather than maximized or minimized, the degree of control.

The issue of how to optimize control (that is, to simultaneously permit managers sufficient autonomy while maintaining overall control) is of widespread significance. Historically, some firms such as ITT (International Telephone and Telegraph), under the leadership of Harold Geneen resolved it by developing highly centralized control systems, while other equally large firms (such as Beatrice Foods under William Kames) were able to run US$8 billion organizations with a staff of 100 people or less. This issue is of particular significance in an era of enhanced global competitiveness and downsizing.[7]

Implementation of strategic planning
Another function of control systems is to facilitate the implementation of strategic plans and the planning process. Unfortunately, many organizations complain that 'strategic planning does not work.'[8] Many organizations mistakenly believe that planning is complete when a written plan has been developed. Unfortunately, this is merely the end of the beginning, and an effective control system is required if plans are to be fulfilled. Stated differently, planning is, as we shall see below, actually a component of a control process, and not a stand-alone system, *per se*.

Control Versus Control Systems

Control over an organization can be exercised through many mediums. A manager can exercise control by means of his or her personal supervision, leadership and involvement in day-to-day activities. Techniques such as job descriptions, rules and standard operating procedures can also be used. Budgets, performance appraisal systems, and incentive compensation plans are also commonly employed in attempts to control behavior.

Taken together, we may wish to call all of these things a 'control system.' Unfortunately, the mere existence of an *ad hoc* collection of control techniques does not comprise a true control system.

An 'organizational control system' may be defined as a set of mechanisms – both processes and techniques – which are designed to increase the probability that people will behave in ways that lead to the attainment of organizational objectives. The ultimate objective of a control system is not to control the specific behavior of people *per se*, but, rather, to influence people to take actions and make decisions which in their judgement are consistent with organizational goals.

Organizational control systems (or, for brevity, 'Control Systems') are not visible to the naked eyes of observers in an organization. Yet they are not metaphysical; they are real and permeate an organization.

Control systems are not easily seen or perceived by observers because they comprise a complex set of on-going organizational processes: the budgeting process,

strategic planning, measurement and performance evaluation, the compensation system, and so on.

A Framework for Visualizing an Organizational Control System

Since control systems are of fundamental importance to organizations, we need some way of making them more tangible. To make them easier to grasp, this article presents a framework for visualizing an organizational control system.[9] It specifies the major components of a control system, describes them, and examines how they ought to be articulated if effective control is to be achieved in operating organizations. This framework can be used as a framework for both describing an organizations' control system as well as to evaluate its functioning and effectiveness. It is intended to serve as a 'managerial lens' to make the control system more visible, just as night vision glasses increase our ability to see in the dark. Once the framework has been presented, we shall illustrate its practical values as a managerial tool.

The framework of an organizational control system presented here is represented schematically in Figure 1 as a set of concentric circles. The framework consists of three parts:

1. a 'core control system',
2. organizational structure, and
3. organizational culture.

Taken together, we can term these three components the 'macro-control system'.

The innermost circle comprises what can be termed the 'core control system.' This is a cybernetic structure consisting of four subsystems (planning, operations, measurement, and evaluation-reward) which are articulated (linked) by feedback and feed-forward loops. The middle circle comprises the organization's structure: its set of rules and their interrelationships. The outer circle represents the organization's culture: its value system, beliefs, assumptions; the patterned ways of thinking which are characteristic of the entity. Those three elements of the control system are bounded by the organization's environment. We shall examine each part of a control system, beginning with the core control system.

The Core Control System

The core control system focuses on any aspect of human behavior which has to do with attainment of organizational objectives. The behavior which is the object of organizational control may include the acquisition, allocation, utilization, development, conservation, or disruption of organizational resources. We refer to these activities or functions as the

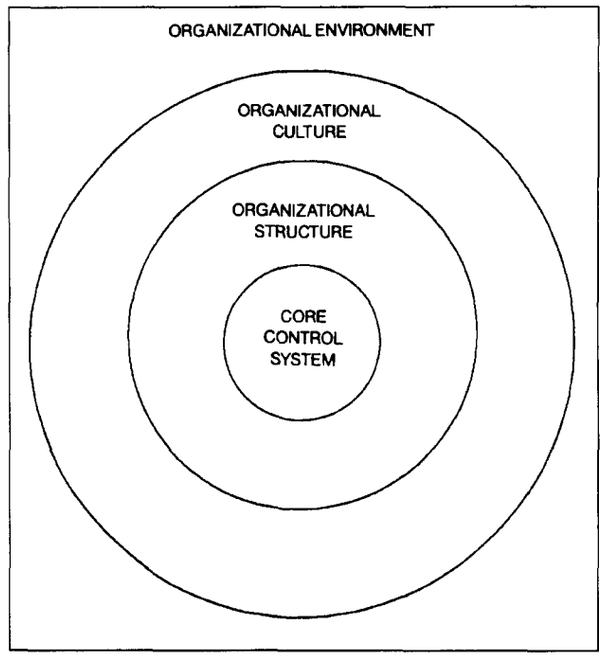

Figure 1 Schematic Representation of an Organizational Control System

'operational' or' behavioral' system. The concept of the core control system presented here presents an integrated structure of five basic organizational processes: planning, operations, measurement, feedback and evaluation-reward. Each of these individual components of the core control system is itself a system, while at the same time functioning as a sub-system of the overall core control system.

The remainder of this section presents a model of the core control system (which is itself a component of the overall or macro-control system), which can be termed the 'micro-control system' of an organization. The model of the core control system is presented schematically in Figure 2, and each component (or subsystem) is described, in turn, below.

The Planning Subsystem

Planning, which can itself be defined in many ways, is basically the process of deciding about the objectives and goals of an organization (and/or its members) as well as the means to attain those objectives' goals.[10] In this context, the term 'objectives' refers to relatively broad statements about things an organization wishes to achieve in a given 'performance area' (markets, products, personnel, financial results, etc.). 'Goals' represent the quantitative level of aspiration sought to be attained for a given objective. For example, the financial objective for Pepsico may be 'to earn a satisfactory return upon net assets employed in the business', while its goal or standard of performance for a given year might be '18 per cent pretax ROI.[11]

All organizational activities ought to be directed to achieving certain predefined objectives. These include

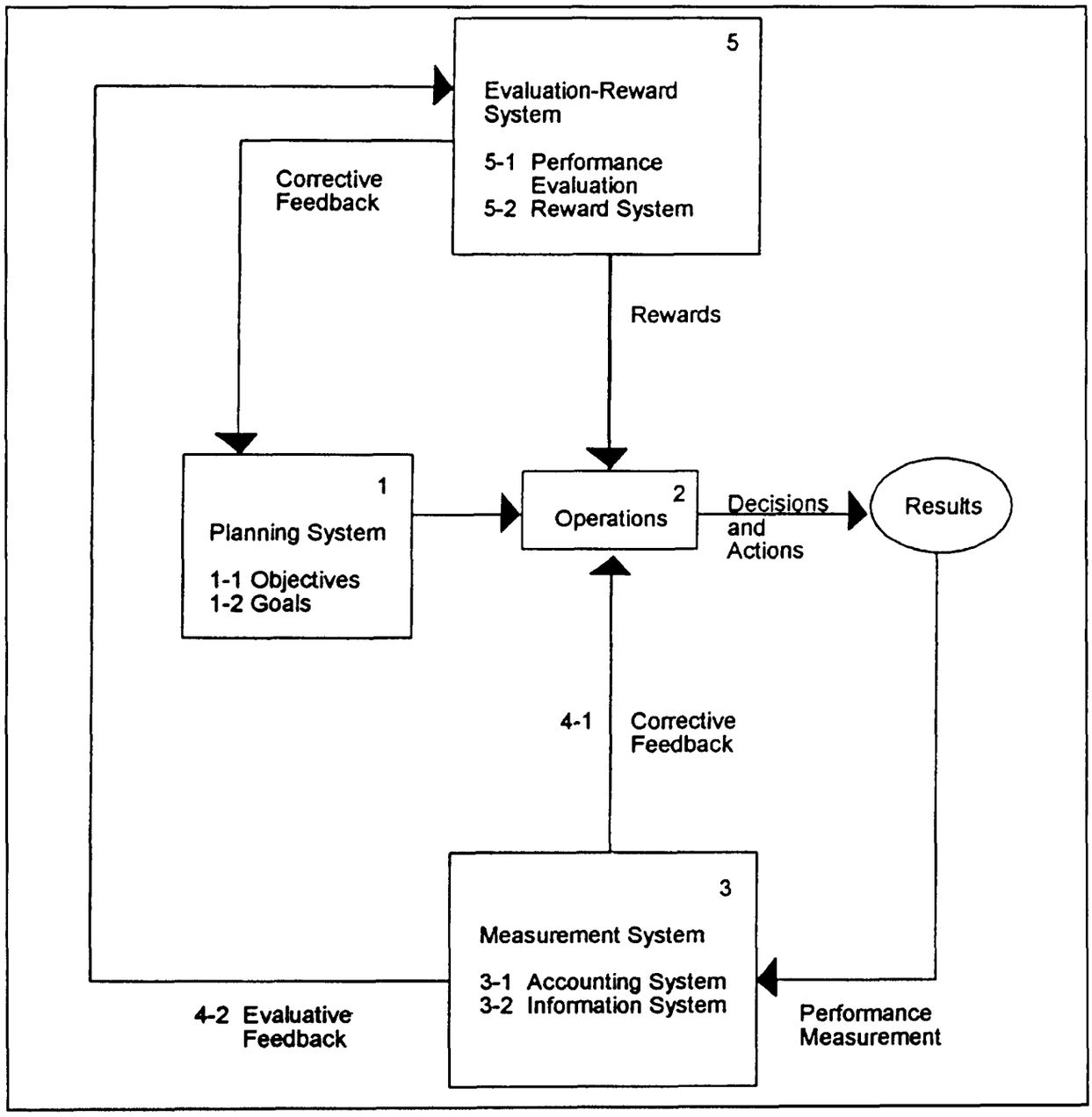

Figure 2 Schematic Model of the Core Control System

'ultimate objectives' and 'instrumental objectives.' In the recruitment unit of an enterprise, the ultimate goal is to satisfy the clients' needs for personnel by recruiting qualified managers on a timely basis. Some of the unit's instrumental objectives are to decrease the average time between a vacancy and the placement of a qualified employee on the job, and to decrease the average percentage of positions which are open and awaiting managers. The unit's ultimate objective is merely an instrumental objective for the firm as a whole.

The ultimate objectives of an organization are its *raison d'être*. From the perspective of an organizational control system, the function of organizational objectives is to help direct or channel human effort. They are simultaneously the ends which are sought and the means for directing the attention of people.

A goal represents what performance ought to be to achieve a given objective. The objective of a sales person may be to generate revenue for the firm, while the goal for the revenue may be last month's (or last year's) sales plus 5 per cent. Goals may be based on management judgement, expectations, or historical data.

Goals may be used to establish desired performance levels, to motivate performance, and to serve as a benchmark against which actual performance can be assessed. For example, 'standard costs' can be used in a manufacturing plant to try to motivate employees to control production costs as well as to evaluate their performance.

From the perspective of a control system, objectives and goals are intended to facilitate both *ex ante* and *ex post*

control. *Ex ante* control is motivation of performance before the operational or behavioral system is executed. The standard is intended to influence the desired performance levels of people. *Ex post* control is the use of goals in evaluating actual performance and serving as a basis for rewards, which, in turn, reinforce or modify future performance.

The Operational Subsystem

Operations, or the operational subsystem, refers to the on-going system for performing the functions required for day-to-day organizational activities. The 'operational system' can refer to any level of organizational analysis: individuals, teams, departments, divisions, other strategic business units, or even the total enterprise. Stated differently, this means that a core control system can be designed for any component of an organization, from an individual sales person to an entire enterprise, such as Unilever.

The Measurement Subsystem

In an organizational context, measurement is the process of assigning numbers to represent aspects of organizational behavior and performance. The overall measurement system includes the accounting system with its measures of financial and managerial performance. It also includes nonfinancial measures of organizational performance, including production indices such as scrap rates, capacity utilization and product quality (rejection ratios) measures as well as (at least potentially) social accountability measurements.

Measurement performs a dual function as part of a control system. One function is that numbers generated may be used to monitor the extent to which goals and standards have been achieved, so that organizational members may be provided with corrective and/or evaluative feedback. This is termed the 'output function' of measurement. The second function of measurement related not to the numbers produced by measurement operations, but rather to the phenomena caused by the act or process of measurement *per se*. The very fact that something is the subject of measurement tends to influence the behavior of people in organizations. Thus the medium of measurement is itself a stimulus. This is termed the 'process function' of measurement.[12]

The accounting system is a component of the measurement system of an overall control system. The budgeting system in organizations is part of the planning system as well as the measurement system. However, neither the accounting nor the budgetary system are equivalent to the whole of a control system, because they lack critical components. In the case of the accounting system the pieces missing are planning and evaluation-reward, while in the case of budgeting the piece lacking is the evaluation-reward system.

From the perspective of an effective control system, all major goals ought to be measured, because one of the dysfunctional effects of control systems using measurements is that unmeasured goals tend to receive less attention, if they are not totally ignored. For example, a US Department store introduced an incentive pay plan which compensated people on the basis of 'sales volume' as a performance measure. One consequence of using this measure was competition for sales among employees, while another was tendency to neglect unmeasured functions such as arranging merchandise for displays and stock work.

The Feedback System

Feedback consists of information about operations and their results. There are two types of feedback: 1) corrective and 2) evaluative. Corrective feedback is simply information about the performance of the operational system which is designed to help adjust operations in order to improve performance. Evaluative feedback is information about how well the operational system is doing. It provides a basis for performance evaluation as well as the administration of rewards.

The Evaluation and Reward Subsystem

The evaluation-reward system refers to the mechanisms for performance assessment and the administration of rewards. This is the final component of an organizational control system. It facilitates *ex ante* and *ex post* control.

Evaluation involves assessing the performance of individuals or groups in meeting organizational goals. Typically, performance evaluation is based upon some system of measurement and the measures of performance commonly used are accounting measures such as budgets and standard costs. The evaluation process determines how rewards shall be administered to people.

Rewards are outcomes of behavior that are desirable. The rewards derived from people performing a task in an organization can be extrinsic or intrinsic. When people perform tasks because they are interesting, rewards are intrinsic. When people perform tasks because of the rewards they expect to receive from others (praise, pay), rewards are extrinsic. In organizations, many situations offer a combination of intrinsic and extrinsic rewards.

The purpose of rewards (such as compensation, promotion, recognition) offered by a control system are to motivate people to behave in ways which will help attain organizational goals, to reinforce positive performance, and to modify negative performance. To be effective in motivating people, rewards must be perceived as linked to organizational goals and to behavior which produces results that lead to goal attainment for the organization and in turn for individuals. This is the notion that people must perceive their task-oriented behavior as a 'path' toward their own goals.

Sometimes organizations fail to offer rewards to motivate desired behavior, or offer rewards for one type of behavior while actually trying to motivate another. This has been termed by Kerr (1975) as 'the folly of rewarding A while hoping for B.' A business manager may be rewarded for not exceeding her budget, even though the firm hopes she will also pay attention to personnel development.

Another important aspect of organizational rewards is their power to motivate and reinforce behavior. As noted, *ex ante* control refers to the initial motivation of behavior through the expectation of rewards. Once the desired behavior occurs, it is necessary to motivate the person to continue to behave that way, to reinforce the behavior. Reinforcement occurs when behavior that is evoked is followed by a reward and leads to an increasing likelihood that the same behavior will be repeated.

Anything that results in reinforcing the strength of a response, such as recognition, praise, money, promotions, and performance evaluations, is a reinforcer. There are two classes of reinforcers: primary and secondary. Primary reinforcers are things which are intrinsically rewarding. They satisfy needs directly, as do food, sex, and certain games. Secondary reinforcers are things that are rewarding because of their association with primary reinforcers or their capacity to lead to them. Secondary reinforcers are extrinsically rather than intrinsically satisfying.

The fundamental notion underlying the principle of reinforcement is that the likelihood of specified behavior is increased if the occurrence is followed by a reward. Behavior not followed by a reward is less likely to occur in the future. This is called 'extinction'.

The effects of rewards on behavior involve not only what the reward is, but when it is received. Reinforcement immediately following behavior has a different effect than rewards that are delayed. The greater the interval between behavior and the receipt of the reward, the less the effect on future behavior. Unfortunately, in most organizational situations, immediate reinforcement is not feasible. It may not be possible to raise a person's compensation immediately after high achievement.

Another aspect of timing or scheduling reinforcement involves the issue of rewarding all occurrences of desired behavior or some portion of them. Studies indicate behavior may be more sustained when rewarded only part of the time. This finding may account for the behavior of players at Nevada slot machines, who are known to be reinforced by small, infrequent payoffs.

The Core Control System as a Whole

The core control system as a whole can be viewed as a cybernetic model, i.e., a closedloop, feedback system such as a system for temperature control.

The operational (behavioral) system for a given activity is the focus of the control system and includes planning, measurements, feedback and evaluation/reward. There is initially a process of goal and objective setting which channels effort. Once set, the goals and standards become performance standards, which function as *ex ante* and *ex post* control. In their *ex ante* functions they serve as inputs to motivate behavior in the operational system, while in their *ex post* functions they are inputs to the evaluation/reward subsystem. Measurement directs attention toward measured dimensions of goals. It also provides corrective and evaluative feedback. Organizational rewards also serve as *ex ante* and *ex post* control functions. *Ex ante*, they are a source of arousing motivation toward organization goals. *Ex post*, they reinforce or extinguish behavior.

Illustration of Core Control System

To illustrate the framework for core control system, we will examine the application of the model in a manufacturing plant. As seen in Figure 3, the plant has five key result areas: production volume, quality, safety, energy utilization, and scrap. All of these key result areas are different in nature. Production volume is something that can be easily quantified. Energy utilization and scrap can also be measured but in a different way. Quality and safety require still a different type of measurement.

The company has established goals for each of these five key result areas, as listed in the column titled 'This Year's Goals.' The firm also shows last year's actual performance in the next column. In addition, this year's performance is tracked on a monthly basis in the adjacent columns.

Virtually any company or any unit of a company can use a format similar to that shown in Figure 3 to apply the control model to its operations. This approach can be useful for the company as a whole, a division, a department, or even an individual such as a salesperson. Indeed, I observed an example of the application of this framework on a visit to the People's Republic of China in 1983 in a chemical plant located in the city of Shanghai. The plant manager was using a blackboard to list the key result areas, current performance goals, prior year's actual performance, and historical best performance, as well as to track the actual performance of the plant to date. Whenever an employee walked past the blackboard, he or she got a quick glimpse at how the plant was performing to date. All the system lacked to be a complete core control system as we have defined it here, was the link to rewards.

Different Configurations of Core Control Systems Elements

Although all four of the basic elements of the core control systems must be present for the system to function fully, it is possible to find in actual organizational settings

Key Result Areas	This Year's Goals	Last Year's Actual	This Year's Performance											
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1. Production Volume														
2. Quality														
3. Safety														
4. Energy Utilization														
5. Scrap														

Figure 3 Control Model's Application in Manufacturing Plant

different configurations of one or more of the system's elements. For example, it is possible to observe a 'control system' that consists merely of a planning system with little else. In such situations measurements may be available only at year end and thus are not available for periodic assessment of performance on a real time basis. On the contrary, performance measurement systems may be found in situations without any formal system for planning and goal-setting. In these situations, it is not possible to evaluate actual performance in relation to plans or budgets.

A major consequence of the existence of different configurations of core control systems elements is that each observed control system may be expected to produce different degrees of control. Accordingly, it is useful to conceive of 'control' as a variable, where the amount of control is a function of the configuration of control system elements.

For conceptual purposes, it may be useful to think of control as achieving different degrees or 'control levels', according to the number of control system elements which comprise the system, as represented in Figure 4. By definition, if none of the four elements of the core control system are present we shall define this condition as first degree control. In this condition, there are merely operations (decision and actions) which produce results. Control occurs as a byproduct of personnel supervision. This type of condition is not uncommon, and, indeed, is characteristic of entrepreneurships and relatively small businesses. Second degree control consists of operations plus any one additional element: planning, measurement, or evaluation-reward. For example, an organization may have a measurement system without formal planning or even without any system for performance assessment and the administration of rewards.

Similarly, different combinations and configurations of control system elements may exist as illustrated in Figure 4. This conceptualization can be used both in understanding the effects and defects of control systems as well as a guide to their evaluation and/or design.

Organizational Structure as a Component of Control

The second component of the overall or macro control system shown previously in Figure 1 is organizational structure. Scholars have long recognized that structure functions as a form of control (Etzioni, 1961; Otley and Berry, 1980; Child, 1979). Etzioni (1961) states that 'organizations theorists have argued that organization structure is developed as a response to the problem of control'.

Specifically, structure functions as a control mechanism both by specifying the behaviors expected from people in the performance of their roles, as well as by specifying the authority and reporting relationship of the entire set of roles which comprise the organizational structure, *per se*. Thus, several structural dimensions contribute to the process of control including the degree of centralization or decentralization, functional specialization, degree of vertical or horizontal integration, and the 'span of control' (number of direct reports).

In contrast with the core control system, organization structure is relatively static. It represents a strategic response to the requirements of markets, technology, and the environment.[13]

Organizational Culture as a Component of Control

The term 'culture' is subject to many different definitions and denotations. Kroeber and Kluckhohn (1952) devoted an entire book to a study of the history, definitions, and properties of the nature of culture. Elsewhere Kluckhohn (1952) stated that: 'Culture consists in patterned ways of thinking, feeling and reacting, acquired and transmitted mainly by symbols, constituting the distinctive achievement of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values'. In an organizational context, Ouchi (1979) refers to culture as the broader values and normative patterns which guide worker behavior, practices and policies. In this article, we shall refer to organization culture as the set of values, beliefs, and social norms which tend to be shared by its members and, in turn, tend to influence their thoughts and actions.

Culture is, in fact, the starting point for the design of an organizational control system. In spite of the fact that it changes slowly and typically with great difficulty,

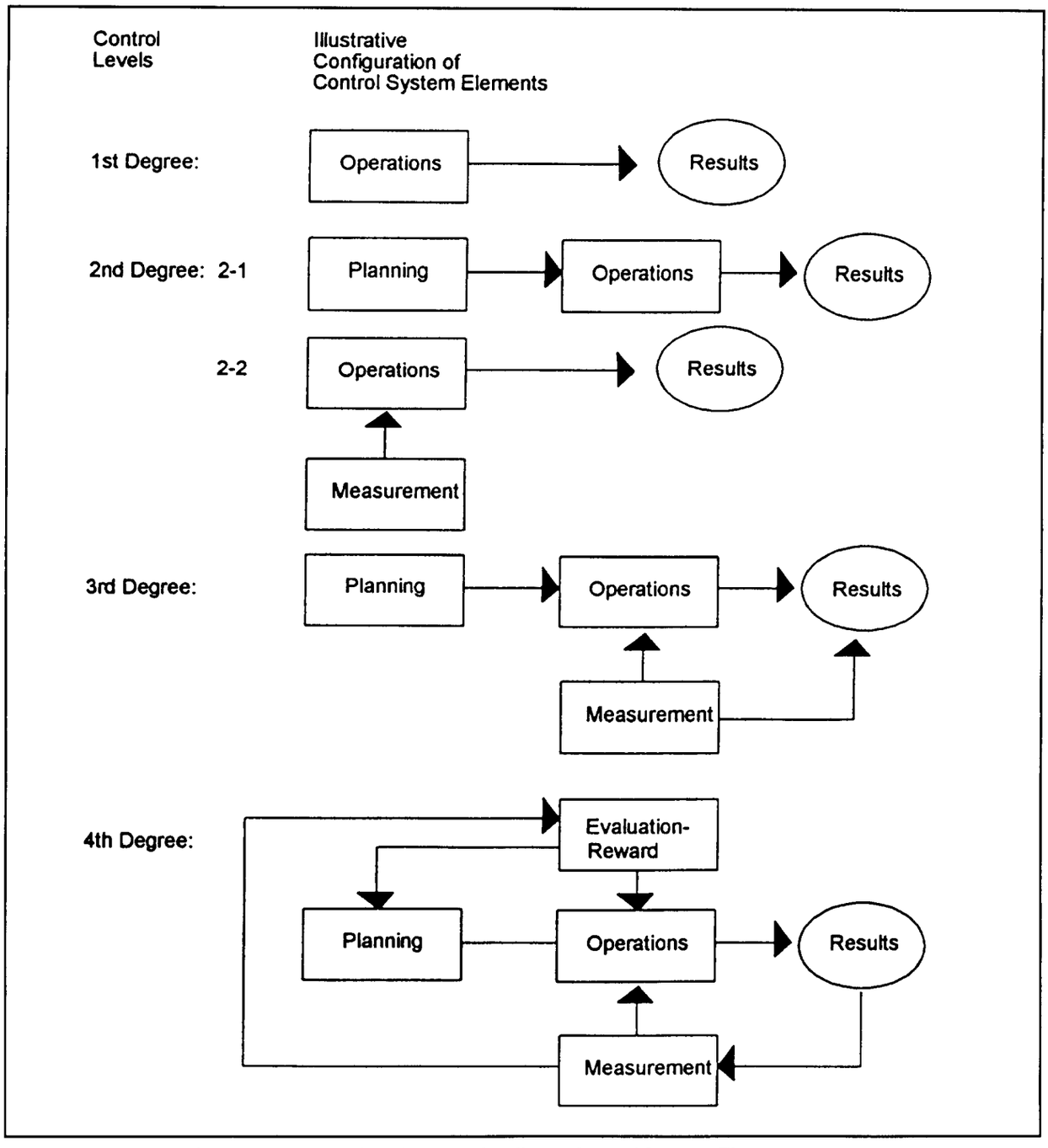

Figure 4 Levels of Control Achieved by Different Configurations of System Elements

organizational culture is a variable. It is subject to design, and can be the product of management decision. For example, in the early 1980s the Board of Directors of US-based RCA Corp. decided to replace that company's president, Edgar H. Griffiths, with Thornton F. Bradshaw. According to an analysis presented in *Business Week*. (1981) Bradshaw was chosen explicitly to change RCA's culture. His task was to change the value system in the company from one that stressed short-term projects and planning to long-range goals. *Business Week* quoted an unidentified 'source close to the Board,' as stating that under Griffiths: 'Long-range planning means: What are we going to do after lunch.' The article also stated that, Bradshaw '... must redirect the culture of the company from one based on intense politicking to one that rewards performance'.[14]

Managerial Uses of the Control Systems Model

The control systems model presented above has three major, related uses by management:

1. It can be used to describe and understand the structure of the control systems in actual operating organizations,

2. It can be used to evaluate the functioning and effectiveness of such systems, and
3. It can be used to design or redesign control systems as managerial tools.

Describing Control Systems Structure

If we wish to get a picture of the structure of an organization, one way is to view an 'organization chart,' which specifies the roles of people and their reporting relationships. Admittedly, the organization chart is imperfect, because the actual organizational structure is typically far more complex than can be reduced to such a chart. Nevertheless, it does provide a first approximation for describing an organization.

If we wish to get a picture of the structure of an organization's control system, we need something comparable to an organization chart, which will specify the elements of the control system and their interrelationships. For this purpose, we can develop schematics such as those shown previously in Figure 4. We shall term these 'Control Systems Charts' because they show different aspects of an organization's control systems.

Evaluating the System

Another related use of the model presented above is in evaluating the functioning and effectiveness of the system in an organization. Using control systems charts we can determine whether:

1. All three of the major elements of a control system have been sufficiently developed (culture, structure, and the core control system);
2. All three of the major elements articulate with one another;
3. All the components of the core control system (planning, measurement, etc.) have been developed sufficiently; and
4. All the components of the core control system articulate with each other.

Items 1 and 3 refer to the development of components of the control system, while items 2 and 4 relate to their articulation as parts of an integrated system.

In some cases, not all the required parts of a control system may be in place. In others, all of the pieces may be present but may not articulate as a system with each other. Whenever there is a gap between organizational or individual performance, one of the principle contributing factors is likely to be the design (or lack of it) of an organization's control system.

Design and Redesign of Control Systems

The third and ultimately most important use of the model presented in this article is for the design and redesign of control systems. The model can be used as a lens to understand why an existing control system is functioning at a suboptimal level, and can also be used as a template to design a new system or redesign one that is already in place.

Illustration of the Control Model's Application

In this section we shall examine the control system of an actual company to illustrate the practical use of the model In describing and evaluating the system. The firm is a medium-sized US real estate company located in a large metropolitan area.

Description of the Firm

The firm is a residential real estate company. It provides a full set of services (brokerage, property management, leasing, etc.) to buyers of residential real estate throughout a relatively large metropolitan area in a major US city. The firm's organizational structure is shown in Figure 5.

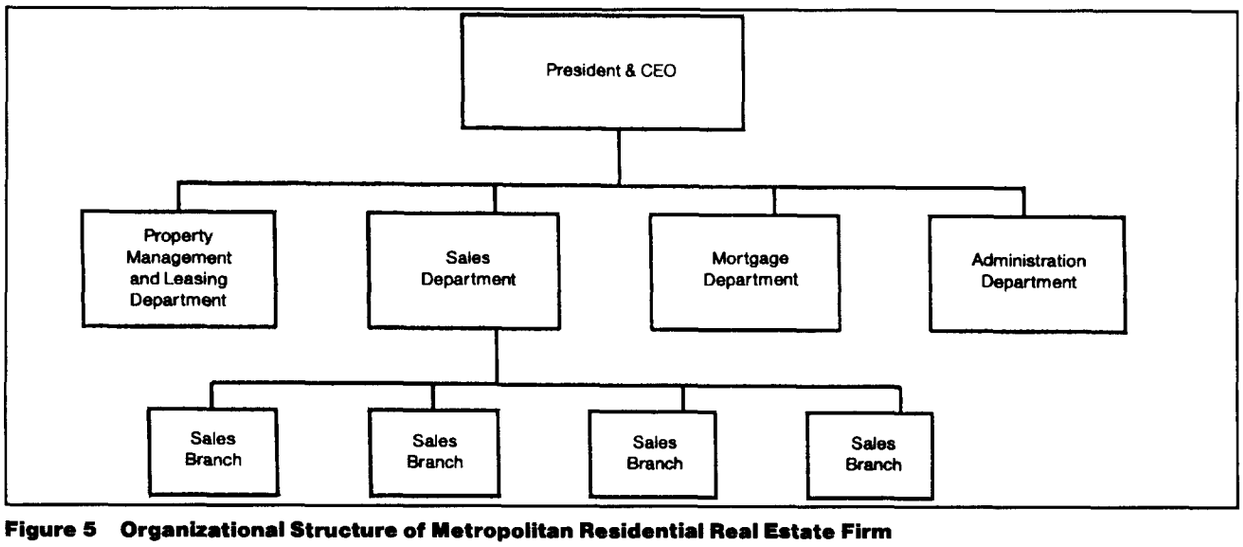

Figure 5 Organizational Structure of Metropolitan Residential Real Estate Firm

At the time of the study, the firm had 12 sales branches located throughout the metropolitan area. Each branch was headed by a branch manager who was supposed to be responsible for branch revenue and costs. Thus, technically each branch constituted a profit center. Branches typically had between 10–25 'sales associates' (sales personnel) and 1–2 clerical personnel. The annual volume of residential real estate sold was approximately US$300 million.

Firm's Culture, Structure, and Budgeting Prior to Study

Residential real estate firms in the US are sales oriented. They tend to be entrepreneurships begun by one person or a few people who were initially successful salespersons themselves and founded their own companies because of available business. Neither the owners nor manager in residential real estate firms typically have formal management training or managerial experience in other industries. Thus the culture found in such firms may be characterized as a sales culture. Accordingly, the explicit and implicit value system of the firm emphasizes sales: 'listing' of properties to be sold and sales of properties. A 'listing' is a contract between the principal (property owner) and agent (broker for the latter) to have exclusive rights to sell property. The culture also states that sales is a 'numbers game.' If you make so many calls, house showings, etc. you will get listings and sales, and, in turn, earn income.

Branch managers tend almost exclusively to be former salespersons who have been promoted. Few real estate firms have formal training programs for recently promoted managers. They are expected to learn by doing the job. Since the firms are entrepreneurial in style, there are not typically job descriptions for branch managers, or if role descriptions exist, they tend to be vague. Accordingly, the branch manager tends to define his/her own job and, not surprisingly, the notion of the job often emphasizes the sales component or things which support sales, rather than such administrative matters as budgeting, planning, cost control, etc.

Branch managers receive a base compensation of X thousand dollars per month. In addition, they receive an 'override' of 1 per cent of 'company dollars,' (gross commissions income received by the firm less salesperson's share).

The Control Problem

The basic problem with respect to budgeting in this firm is that branch managers paid little or no attention to the budget or variances. They virtually ignored the income statement. Stated simply, branch mangers ignored variances, large or small. Many, if not all, hardly looked at the budget or income statement.

The theoretical as well as practical managerial question underlying the behavior may be stated quite simply: Why did the branch managers ignore the firm's income statement and budget variance? To answer this question we shall draw upon the framework of control presented above to examine the elements of culture, organizational structure, and core control system. Taken together, an analysis of these elements explains the very rational behavior of branch managers in ignoring income statements and budgets.

Culture and Budget Control

The firm's culture unintentionally mitigated against branch managers paying attention to budgets, income statement, and, indeed, even profits; the culture emphasized SALES all in capital letters. The explicit value system as well as the informal socialization system all held the successful salesperson in high regard. This carried over to successful branch managers; they were successful if they could attract, motivate, and retain 'top sales people'.

Organizational Structure and Budgetary Control

The role of sales managers was a sales-oriented role. In addition to the ability to recruit and manage personnel, the sales managers must be knowledgeable about real estate transactions both to train sales associates and to serve as consultants on complex transactions. Knowledge of accounting and budgetary control skills are not explicitly viewed as part of the role and, if present, are not highly valued.

The Core Control System and Budgetary Control

The firm's core control system was not explicitly designed as such. There is a plan (budget), a measurement system (the accounting system), feedback (budget reports and income statements), and an evaluation-reward system (performance appraisal and compensation systems). However, these components or subsystems have not been designed either: (1) explicitly to lead to emphasis on profits and attention to variances from profit budgets;, or (2) to articulate with one another in an integrated fashion. The former problem concerns the purpose of the system, while the latter concerns the system's architecture or structure.

In the language of the firm's culture, the branch managers do not perceive 'ownership of the budget'. It is not *their* budget, but *top management's budget*. There is also a problem with the accounting system as it relates to providing information for real time decisions and control. In a sales culture such as this, the art of completing a contract of sale is the major point of psychological closure for a salesperson and a branch

manager. From both a legal and accounting point of view, however, the transaction is not completed (final) until the deal 'closes' (that is, all the conditions of the transactions have been satisfied and money and deeds to property are exchanged). A 'closing' may occur 30–40–90 days or more after the deal has been reached, and by this time salespersons and branch managers are absorbed by other potential transactions.

To deal with the uncertainty in realization of income, the firm's accounting system either operates on a cash basis under which income is realized and commissions paid when escrow closes, or on an accrual basis with an 'allowance for cancellations' which is similar but not identical to an allowance for uncollectables.

Thus there is a conflict between the psychological mind set of branch managers with respect to income 'earned' and the accounting definition of income earned as well as the financial reporting of such income. This difference has led the managers to reject and ridicule accountants and accounting systems while still being forced to accept their dictates. Consequently, the numbers generated by the accounting system as reported in company income statements are viewed as irrelevant to managers for action-taking purposes. The numbers affect the timing of the manager's compensation, but are not seen as useful.

In addition, the most relevant numbers concern sales revenues not net profit, because the compensation system provides for an override (bonus) based upon sales not branch profits. This is congruent with the sales-oriented culture of the firm, rather than economic theory. It is an instance of what Kerr (1975) has referred to as 'the folly of rewarding A, while hoping for B'.

Discussion of the System

The operation of the control system at this US real estate company helps to illustrate the usefulness of the model

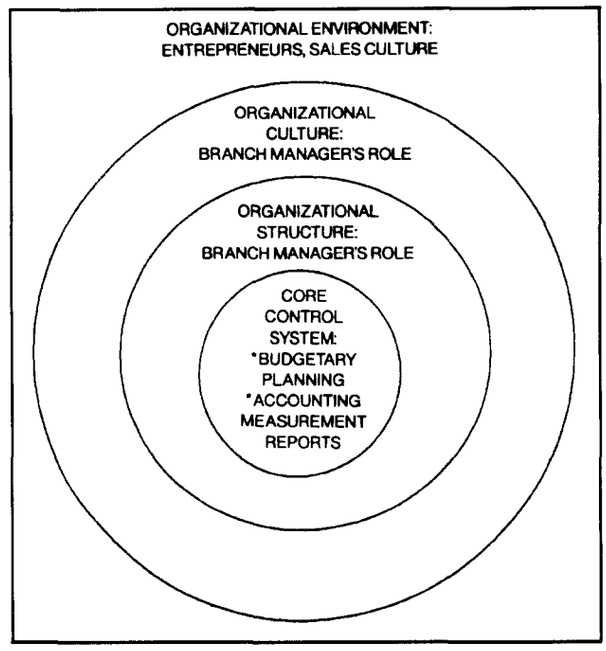

Figure 6 Schematic Representation of an Organizational Control System

presented above. First, the organization's control system cannot be viewed merely as a set of control techniques such as budgets or accounting measurements and reports; these control mechanisms did not motivate and control the behavior of the firm's managers.

The 'real' control system must be viewed as the combination of the firm's culture, structure, budgetary planning, and accounting measurement system, as summarized in Figure 6, which applies Figure 1 to this particular organization. A detailed description of the specific aspects of the firm's control system is shown in Figure 7.

Using the framework developed in this article, Figures 6 and 7 help to make the firm's control system explicit. We can see that although the firm's president states that its

Elements of the Control System	Metropolitan Residential Real Estate Firm
1.0 *Organizational Culture*	1.1 Values
	A Emphasis on 'sales': listings and sales of properties.
	B Real estate is a 'numbers game'.
	C Branch managers are former sales persons.
	D Learning by on-the-job training.
	E The successful sales person is held in high esteem.
	F Managers are successful if they attract, motivate, and retain 'top sales people'.
2.0 *Organizational Structure*	2.1 There are no job descriptions.
	2.2 The branch manager's role emphasizes sales not administration.
3.0 *Core Control System*	3.1 The firm's core control system was not designed as such.
	3.2 There is a formal budget.
	3.3 Accounting for transactions differs from psychological closure.
	3.4 The accounting system measures results.
	3.5 Results and variances are reported.
	3.6 The compensation system rewards sales, not meeting budget.

Figure 7 Metropolitan Residential Real Estate Firm: Summary of the Control System

objective is to control *profitability*, the system actually focuses upon sales. Thus it is quite natural for the branch managers to pay little or no attention to the budget or variances.

If the firm wishes to change the behavior of its managers, it must revise its control system. The firm's culture ought to be revised to focus upon profits rather than sales; the organizational structure and managerial role needs to be revised, and, also, the core control system.

Criteria for Design and Evaluation of Effective Control Systems

This final section presents criteria which can be used to guide the development of evaluation of a control system. It also examines the adverse or dysfunctional effects of control systems that have not been effectively designed.

The ultimate criterion of an effective control system is the extent to which it increases the probability that people will behave in ways that lead to the attainment of organizational objectives. The criterion of an effective control system is the extent to which it creates goal congruence. If a control system sometimes leads to goal congruence and sometimes to goal conflict, it is ineffective, or less effective than might be desired. One may ask about a control system:

- to what extent it seeks to control all relevant goals or aspects of performance;
- to what extent it leads to behavior which is intended (or purports to) lead; and
- how consistently it leads to the same behavior.

The first of these questions has to do with a penultimate goal or criterion of control systems, while the second and third are instrumental criteria.

Behavioral Relevance

To be effective, a control system must identify all relevant behaviors or goals which are required by the organization. If the system does not identify all relevant goals and seek to control them, then people may simply not channel their efforts toward some desired but uncontrolled behavior. A university may desire to achieve both the goals of research and education, but may only have a control system which deals with research. The system would monitor and reward research while hoping for attention to education as well.

Behavioral Validity

This construct refers to the extent to which an organizational control system leads to the behavior it purports to. A control system may be desired to motivate attention to achieving budgeted profit and personnel development. If it does, it is 'behaviorally valid'. If it leads to behavior that is in conflict with these goals, it is 'behaviorally invalid.' In general, a control system cannot be expected to lead to behavior that is totally consistent with what is desired, and we must strive for a satisfactory degree of behavioral validity.

Behavioral Reliability

This is the extent to which a control system repeatedly produces the same behavior regardless of whether this behavior is intended or not. A control system may have a high degree of behavioral reliability but lead consistently to unintended behavior. It can also have a high degree of behavioral validity, but only achieve this irregularly.

Ineffective Control Systems

An ineffective control system leads to what has been termed 'dysfunctional behavioral consequences.' There are two types of dysfunctional behavior: (1) goal displacement and (2) measurementship. Each is discussed below.

Goal Displacement

This involves a lack of goal congruence created by motivation to achieve some goals sought by the organization at the expense of other intended goals. Goal displacement may be caused by several things, including suboptimization, selective attention to goals, and inversion of means and ends. Suboptimization occurs when performance of an organizational subunit is optimized at the expense of the organization as a whole. A control system may be intended to contribute to profit and seek control of manufacturing efficiency by means of standard costing. Management may reward performance based upon variance measurement. However, unintended consequences of this control system may occur. It may lead persons responsible for standard costs to concentrate upon their measured performance, at the expense of other organizational goals, such as sales revenues, for which they are not responsible. Persons responsible for manufacturing cost centers may be reluctant or unwilling to modify production schedules to accommodate special customer requests, because of the effects of such changes upon manufacturing costs. From the perspective of the manufacturing subunit, this is rational behavior because their goal is manufacturing efficiency, rather than profit *per se*. The suboptimization is caused by factoring overall organizational goals into subgoals and holding individuals and units responsible for those subgoals. It is a common problem and difficult to avoid in large complex organizations, such as IBM, Unilever, Philips, or Allied-Domeq. It happens because the control system for the subunit lacks total behavioral relevance, that is, not all required behaviors are controlled.

Another type of goal displacement is caused by selective attention to organizational goals. This is closely related to suboptimization, and occurs when certain goals of the

organization are pursued selectively while goals receive less attention or are ignored. The large international accounting and auditing firms such as Price Waterhouse or Arthur Andersen may wish to achieve both current profitability and employee development, yet have a control system that monitors only the former. Managers may be motivated to maximize contribution to profit even at the expense of developing personnel. One possible solution is to measure both of these dimensions and include them in performance evaluation. Recognition of this problem has, in part, led to the development of 'human resource accounting,' which is concerned with the measurement of the value and cost of people as organizational resources (Flamholtz, 1985). Measures of changes in human resource value might be used in assessing management's attention to this aspect of performance, as part of a 'Human Capital Management' control system.

A third type of goal displacement is caused by the inversion of means and ends. This occurs when a control system tries to motivate attention to certain instrumental goals, which become ends in themselves because of rewards. For example, Blau and Scott (1962) reported a study of a public agency whose major goal was to serve workers seeking employment and employers seeking workers. The tasks to be performed included interviewing applicants, helping them to complete application forms, counseling them, and referring them to jobs. To control the interviewers, the agency monitored the number of interviews conducted. The effect of this control system was to motivate the interviewers. They paid attention to the instrumental goals (numbers of interviews), while neglecting the overall (but unmeasured) goal of placing people in jobs.

Measurementship

This involves the lack of goal congruence created by motivation to 'look good' in terms of the measures used in control systems, even though no real benefit has derived to the organization. It involved playing a 'numbers game' and manipulating the measures used by a control system. There are two primary types of Measurementship, 'smoothing' and 'falsification'.

Smoothing refers to an attempt to time activities in such a way as to alter the appearance of measures in different time periods. All measures used in control systems are related to specified time periods. We may wish to control units of production or net income for a month or year. A manager may wish to smooth the calculated net income number in two adjacent periods. This can be accomplished, if profit is expected to be unusually high during the first period, by incurring expenditures that would have been made in the second period in the prior period.

Falsification refers to the reporting of invalid data about what is occurring in an organization. The invalid data is designed to make a person or an activity look good in terms of the measurement system. A number of years ago, a US toy manufacturer, Mattel, was charged with manipulating sales by intentionally accounting for certain transactions incorrectly in order to show good earnings for the stock market. This involved falsification of a performance measure reported to external users of accounting information. More recently, Barings, one of Britain's oldest merchant banks, collapsed, as the result of huge trading losses in derivatives trading by Nick Leeson, its chief Singapore trader. Apparently, in addition to poor judgement, Leeson engaged in manipulating and falsification of accounts (Stonham, 1996).

Although the use of rewards is a powerful incentive to motivate and reinforce behavior, their use simplistically, without being a component of a well thought-out control system, can lead to seriously dysfunctional behavior, as seen in the Nick Leeson – Barings case. As Stonham (1996) explains, Leeson received a bonus of £130,000 in 1993 and £450,000 was proposed in 1994. Yet Barings allowed Leeson to operate almost without control, and certainly without the type of formal core control systems described above.

Uses and Implications for Corporate and Human Resource Management

This article has presented a framework to use as a lens to understand, design, and/or evaluate organizational control systems. The framework begins with an overall model of organizational control, consisting of three major components: (1) the core-control system, (2) organization structure, and (3) culture. Then the core control system is further developed as a cybernetic model, including five related processes: planning, operations, measurement, feedback and evaluation/reward.

Implications for Corporate Management

The primary use of this framework and related models is to make a major organizational system (the control system) more visible so that it can be managed. We have shown how an organizational control system in practice (at the US real estate firm 'Metropolitan Realty') can have contradictions. These structural contradictions can cause many problems, especially in large, complex enterprises such as Unilever, Philips, or IBM.

Since the organizational control system is a major component of an enterprise's overall management system, it can become a source of long-term competitive advantage (Flamholtz, 1995). This can occur because even though an enterprise's products can be copied and/or reverse-engineered, it is more difficult to copy management systems and culture. Accordingly, companies in the same industry such as Glaxo, Rhône Polanc, Pfizer, and Roche are actually competing not only at the level of products and technology but also in terms of their control systems.

It suggests that corporate management must learn to think about control systems more deeply and understand them in more detail. Although the Barings case is the most egregious example, more subtle but nevertheless real opportunity costs are incurred by organizations which do not have a sophisticated understanding of control systems.

Implications for Human Resource Management

As we examine the nature of control systems, it becomes quite clear that the human resource management function plays a major role in control systems design and administration. All of the three components of control systems (core control, structure, and culture) deal with aspects of functions related to human resource management. Similarly, within the core control system, human resource management plays a role, especially in the performance evaluation-reward component.

It suggests the need for the senior human resource manager to be able to play a role as an advisor to general management of human resource issues related to control systems. This, in turn, will require human resource professionals to be familiar with the frameworks presented in this article.

Implications for Scholars

There are a variety of implications of the proposed framework for scholars as well. There are some hypotheses for further research which are explicit within the proposed framework and its related implications, and which are suitable for empirical testing. For example, one hypothesis is that organizations with well developed control systems (both at the 'macro' level of control as well as the 'micro' level of the core control system) have sustainable competitive advantages *vis-à-vis* their competition. One can envision a series of paired-comparisons to test this notion.

Another avenue of research involves an investigation of the relative importance of each of the three components of the macrocontrol framework in different natural environments. For example, it has been asserted that Japanese organizations rely more on cultural control than normal control mechanisms. Is this valid? In addition, are there differences within the European Community as to the degree to which the different components of control are used? Can we explain differences in overall economic performance of enterprises in terms of the extent to which they employ the kinds of control models described in this article? This would be a useful area for investigation.

Conclusion

Organizational control systems are intended to help influence the behavior of people as members of a formal organization. An organization's control system consists of three major components: (1) a 'core control system'. (2) structure, and (3) culture. In turn, a core control system consists of five related parts: the planning system, operations, measurements, feedback, and evaluation-rewards. Control systems are necessary to motivate people towards organizational goals, for coordination of diverse efforts, and to provide feedback about problems.

The ultimate criterion of an effective control system is goal congruence, an identity between the goals of organization members and the organization as a whole. To achieve overall goal congruence, a control system must also satisfy certain penultimate and instrumental criteria: behavioral relevance, behavioral validity, and behavioral reliability.

If a control system does not satisfy these criteria, unintended dysfunctional results may occur. These problems include goal displacement and measurementship.

Notes

1. This article draws upon Flamholtz (1990; 1996).
2. The literature on control is quite diverse, but can be categorized as comprising three different perspectives: the sociological, the administrative, and the psychological. For a review of the academic literature from these three perspectives, see Flamholtz *et al.* (1985). Also see Merchant (1985) and Eisenhardt (1985).
3. For alternative conceptualizations of control, see: Weber (1947), Thompson (1967), Birnberg and Snodgrass (1988); Gupta and Govindarajan (1991).
4. For further discussion of this point, see Flamholtz (1983), pp. 153–169
5. Ibid.
6. Sloan (1965).
7. Kets de Vries and Katarina Balazs (1996).
8. Mintzberg (1994), pp.107–114.
9. The model presented in this article draws upon Flamholtz (1996).
10. The problem of reification need not hinder us if we view the 'organization' as a proprietorship, dominant coalition, or institution comprised of individuals and groups.
11. Hall (1975), pp 1–32. Williams and Hinings (1988);
12. Cammann, (1976); Flamholtz (1979); Prakash and Rappaport (1977).
13. Yasai-Ardekani (1989); Child, J. (1979); Keats and Hitt (1988); Miller, Droge and Toulouse (1988).
14. *Business Week* Staff, (1981), pp. 72–3.

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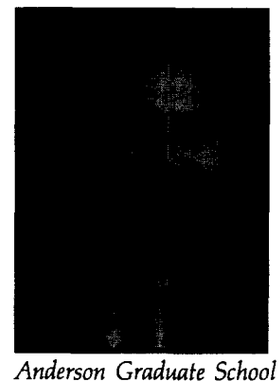

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