6 A conceptual and operational delineation of performance

Michel Lebas and Ken Euske

Introduction

In this chapter the authors address the questions of what performance is and how to create it. The authors develop a series of nine propositions that, taken together, provide an answer to these questions.

After a brief overview of the reasons that led to these questions, and a review of the relevant literature that shows the diversity of meanings of "performance", the authors develop step by step the process that leads to performance, showing it to be a social construct that results from the identification and the sharing of a causal model. That observation leads to the conclusion that performance is meaningful only within a decision-making context. The concept of performance is, therefore, specific to a given set of decision makers. Creating alignment between decision makers both inside and outside the firm is a prerequisite for performance to occur.

In the last sections of the contribution, the authors show the impact of responsibility assignment and of measurement on the operational definition of performance. All in all, the nine propositions form the basis on which performance can be defined, identified, measured and managed.

Performance

The word "performance" is widely used in all fields of management. In the management control area, terms such as "performance management" (Euske, Lebas and McNair, 1993), "measurement", "evaluation" (e.g. Bruns, 1992) and "appraisal" are used. Despite the frequency of use of the word, its precise meaning is rarely explicitly defined by authors, even when the main focus of the article or book is performance (e.g. Baird, 1986; Richard, 1989). Often, performance is identified or equated with effectiveness and efficiency (e.g. Neely, Gregory and Platts, 1995; Corvellec, 1994). A publication of the

French Ministry of Industry (Ministère de l'Industrie, 1993) equated performance with lean production, competitiveness, cost reduction, value and job creation, growth and the long-term survival of enterprises. In short, "performance" is one of those "suitcase words" (Bourguignon, 1995) in which everyone places the concepts that suit them, letting the context take care of the definition.

Using context to clarify the meaning may help create a basis for understanding and discussion, but it may also engender ambiguous definitions. Ambiguity can be beneficial. Differing interpretations of the same reality may generate interaction that spawns new and creative outcomes. However, differing interpretations of the same reality may also generate interaction that is counterproductive and wastes scarce resources. The role of management and the systems they design is not to waste resources but, rather, to use the scarce resources to create value for the various stakeholders of the organization. If managers are to induce performance directly or through their systems and minimize counterproductive behaviour, they must know what performance is and what it implies.

A diversity of meanings of "performance"

A review of dictionaries (both French and English) shows a diversity of meanings for the term "performance". It seems logical in the first place to list all these connotations, as their sum might provide a usable definition. Performance is:

(1) measurable by either a number or an expression that allows communication (e.g. performance in management is a multi-person concept);
(2) to accomplish something with a specific intention (e.g. create value);
(3) the result of an action (the value created, however measured);
(4) the ability to accomplish or the potential for creating a result (e.g. customer satisfaction, seen as a measure of the potential of the organization for future sales);
(5) the comparison of a result with some benchmark or reference selected – or imposed – either internally or externally;
(6) a surprising result compared to expectations;
(7) acting out, in psychology;
(8) a show, in the "performing arts", that includes both the acting or actions and the result of the actions as well the observation of the performers by outsiders; and

(9) a judgement by comparison (the difficulty here is to define who the "judge" is, and to know on which criteria the judgement will be formed).

While Baird (1986) states that performance is action-oriented (i.e. it must be expressed by a verb), as opposed to a substantive or a noun that would refer to performance as an event, "performance" is referred to in most of the references as either an action (obtaining performance) or an event (a result), or both simultaneously. This list leads us to agree with Corvellec (1994, 1995) and Bourguignon (1995) in saying that performance refers simultaneously to the action, to the result of the action and to the success of the result compared to some benchmark. Viewing performance as a comparative judgement captures some of this complexity. If there is to be a judgement, a judge must be selected, and criteria for the judgement need to exist.

The criteria for the judgement are likely to focus on results, since the purpose of management is to create a continuous flow of value. Therefore, it becomes important to create a definition that will focus managers on the anticipation of performance. We take the position that performance is the sum of all the processes that will lead managers to taking appropriate actions in the present that will create a *performing* organization in the future (i.e. one that is effective and efficient). In other words, we define "performance" as doing today what will lead to an outcome of *measured* value tomorrow.

To create something in the future a causal model is necessary, so that the process through which performance (future results) is to be created can be identified and managed. Past performance (past results) alone is not necessarily a good predictor of future performance. There are many illustrations of the lack of predictability of results, and very few examples of predictable results.

Performance and the causal model

A causal model that links actions now to results in the future can take a variety of forms. Figure 6.1 illustrates an example of a generic three-stage causal model consisting of:

- outcomes (often reduced to output and results);
- processes; and
- foundations.

Each firm or organization will need to define uniquely the concepts that apply to its own situation. The very process of defining the three components

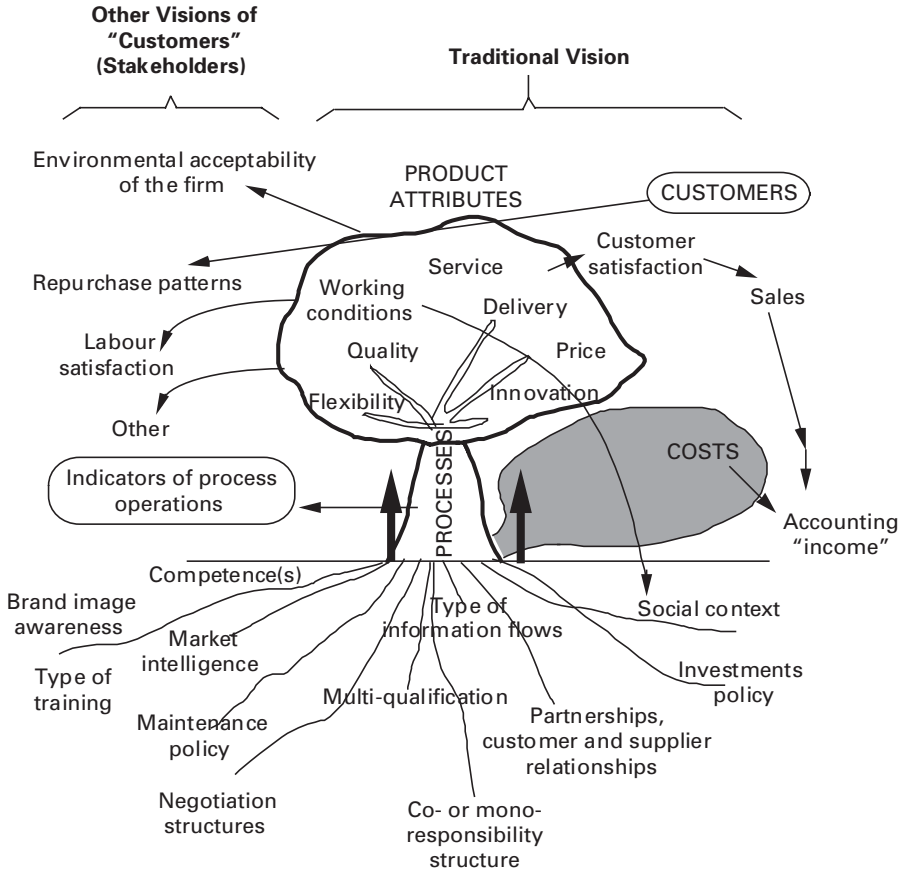

Figure 6.1: The performance tree

Source: Adapted from Lebas (1995).

of the model is, in our view, an essential step in creating performance. Once the model is defined, each organization must select the appropriate indicators[1] to describe it and monitor its status.

This model is portrayed as a tree to illustrate how an organization goes through the process of creating performance. The analogy to a tree helps to capture process complexity and the characteristics of growth and change.

[1] We deliberately prefer the word "indicator" to the more traditional one of "measure". A measure often implies precision; it is usually well defined, and in similar circumstances its numerical value should be the same. An indicator may be less precise, but meaningful; indicators tend to allow for more timely and sensitive signals.

In our illustration outcome, results, or outputs, are divided into two broad categories: traditional conceptualizations and other conceptualizations. Accounting income, shown on the right-hand side of the figure, is an example of a traditional conceptualization of a result that might be held by an owner-manager or a stockholder. However, other results are valued by groups of stakeholders, such as the environmental acceptability of the organization and its contribution to the social welfare, labor and social climate. Social climate is particularly important, because it captures the continued acceptability of the organization to the political, regulatory and administrative powers that, either implicitly or explicitly, grant the organization its licence to operate (Fligstein, 1990; RSA, 1995).

These outputs are consequence of the product attributes that constitute the fruit of the tree. These attributes are the elements of the product that the customer values. They include, of course, the traditional quartet: price, availability, service and quality. They can also include other elements, such as working conditions (e.g. buying union-made products or not buying products made by child labour), innovation and flexibility. The attributes are the basis for customer satisfaction, but also for stakeholder satisfaction in general. The attributes are the result of business processes, which constitute the trunk of the performance tree. They have to be monitored so that they deliver what the stakeholders want within the constraints of the strategic intent of the organization.

Costs that loom quite large as descriptors of financial performance, either directly (cost minimization) or indirectly (earnings maximization), do not play a large role in our causal model; costs are the mere "shadow" of the processes and of the attributes created.[2] Costs are important but they are second-order variables in the understanding of the generation of results.

Continuing the tree analogy, the quality of the processes would be the richness of the sap and its effective movement through the trunk and branches. Further, the quality of processes rests in part on the nutrients in the soil. They are such elements as competence, awareness of brand value, maintenance policy, existing structures of negotiation, partnerships with both customers and suppliers, and the organizational responsibility structure – concepts that are not normally captured in accounting and control

[2] Johnson (1990) has used Plato's cave analogy to explain the concept. In the cave analogy, above ground are objects and forms such as customer satisfaction and activities. Below ground are artificial likenesses and shadows such as accounting information and costing models.

systems. Why are these elements rarely measured by these systems? They are in the "soil", and do not normally catch the light that is needed to create the accounting "shadow". If they do catch the light (i.e. are "seen" by the accounting system) it is a sign that things are not going very well, because it signifies that the tree has been uprooted.

Modelling the performance creation process as a tree offers an opportunity to visualize that outcome results, or outputs, often do not occur in the same time frame as that of actions: the work in the soil, the choice of the type of tree and caring for the tree are all actions that have to be implemented long before any fruit can be seen, let alone harvested. Just as a tree takes several years to bear fruit, the consequences of the interaction with the environment (e.g. the bad health of the workers or of the surrounding community due to hazardous chemicals) take time to materialize. Accounting data does not capture such lags. This illustration is consistent with the fact that the results of an organization are multifaceted and must be described over a long period of time.

Performance is a complex concept. The complexity increases both the difficulty of defining the concept and the likelihood that indicators of performance will at times be contradictory. The contradictions can be managed if one has a good understanding of the process that generates the various types of results; hence the importance of the causal model as a means to understand the organization and its interaction with its environment. However, once a model is adopted, performance, because we define it as the process as well as the future outcome, cannot be separated from the model. The model both defines and legitimates the performance (Fligstein, 1990). Performance is a social construct. The model creates the reality as to what performance is.[3]

The causal model is elaborated by trial and error, critically using past data.

Proposition 6.1

Performance can be expressed only as a set of parameters or indicators that are complementary, and sometimes contradictory, and that describe the process through which the various types of outcome and results are achieved (Lebas, 1995; Kaplan and Norton, 1992).

[3] The view taken in this chapter can be illustrated by a story told about the definition of a "penalty" in football, in which the first referee says: "I blow my whistle when *there is* a penalty," the second says: "I blow my whistle *when I see* a penalty," while the third one declares: "There is no penalty *until I blow my whistle*."

Proposition 6.2

Understanding performance relies on the identification of a causal model that describes how actions today can influence results in the future. Performance is not a one-time event. Performance is dynamic. A performance measure is an instance in the continuous performance creation process. A performance measure is a leading indicator of performance only if the organization has acquired the knowledge and the mastery of its causal relationships and can reproduce this outcome or result in the future. We suggest that the term "performance" be reserved for the sum of all processes that lead to a potential or future sequence of outcomes and results.

Performance and decision making

Even with a common causal model, the description of performance – whether simple, complex, cardinal, ordinal or literal – has no intrinsic value. The description becomes valuable if one or several individuals use it for decision-making purposes. If the description of performance has no possibility of impacting on the decision of the user, it has no value. However, each user can interpret the performance data as he or she pleases according to different time frames, objectives, intent, risk avoidance attitudes or perspectives (inside or outside the organization). This diversity of interpretation increases the complexity of providing a definition of performance.

A description of performance that would be correct from a fiduciary perspective (e.g. the balance sheet) is not likely to satisfy a user who views the organization as an operating entity. Such a description would likely be even less meaningful to a stakeholder preoccupied by the impact of the organization on the social welfare in a community. Even though the decision context may be the same, users with differing time horizons or differing objectives are not likely to seek the same description of organizational performance.

Given a common causal model, the perceived contradiction between the various views of performance may be related to a world-view based on the concept of "or", implying a concept of exclusion (i.e. some may say the organization *either* is profitable *or* maintains employment). However, a view based on the concept of "and" implies a concept of inclusion (that is, the organization can be profitable *and* maintain employment). From an internal, operational point of view, the difference is between dissolving a

conflict and living with a conflict (i.e. accepting the coexistence of multiple dimensions of the same concept). The manager is no longer faced with a dilemma. Rather, the manager has the challenge of taking a proactive position regarding the complexity of performance. One consequence of this view is that, today, some organizations see profit as a constraint, not a goal per se.

Proposition 6.3

Performance is defined by the user of the descriptive signals of performance. Performance, because it is a social construct, is a concept with no objective description. Each person defines it her or his own way.

Performance defined from inside or from outside the organization

Someone inside or outside the organization can develop a causal model to define performance. An internally defined model of causal relationships is likely to focus on the construction of the result through actions. An externally defined model is more likely to focus on anticipating the possible actions the internal actors might select, and estimate the probability of certain future results to be used in some other decision-making process.

The descriptors used in the two cases will not be the same. An outsider will look at general indicators based on some preconceived, and possibly statistically defined, relations, such as the ones found in financial analysis. The actual workings of the organization will remain a black box. It will not be surprising, therefore, that performance as seen by outsiders will lead to much debate, as each analyst will necessarily introduce his or her own bias in the inferences drawn from externally available signals about the activity of the organization.

An insider, on the contrary, will model action variables. While it is normal to have a diversity of views about performance as seen from the outside, the concept of performance as defined from the inside of the organization is more likely to have a unique, although multifaceted, definition, shared by all actors involved in its creation. If the members of an organization do not share the same view of performance, actions cannot be coordinated and resources may be wasted.

Proposition 6.4

Performance does not have the same meaning if the evaluator is inside or outside the organization. The operations of the organization remain a black box for the outsider, while the insider operationalizes performance in cooperation with other internal actors.

Performance and responsibility

For reasons of effectiveness and because of limits on individual competence, each causal model is generally broken down into sub-models. The sub-models are either additive (a Taylor-based view, still prevalent in many organizations) or overlapping (viewing the enterprise as a network of cross-functional processes and management of the "white space"[4] on the organization chart). Each sub-model defines a domain of responsibility (e.g. the manager, the responsibility centre,[5] teams, the management systems, the product or service) and, conversely, each definition of responsibility implies a causal model.

For each of these domains of responsibility there will be different descriptors of performance, and different uses for the signals describing it. Not all these descriptors will necessarily be consistent with one another. Therefore, it is crucial to admit that performance does not have a unique operational definition in an organization. However, the dialogue that will take place to define the richness and the complexity of the concept will be a foundation for the management of performance (i.e. for the proactive construction of performance).

Proposition 6.5

Performance is always connected or attached to a domain of responsibility. The different views of performance associated with the domains provide the basis for an understanding of the complexity and management of performance in the organization.

[4] The concept of "white space" is developed by Rumler and Brache (1990).

[5] It is generally understood that it is important to separate the performance of an organizational subunit (generally a responsibility centre) from that of the individual(s) in charge of the subunit. A manager may very well have good performance in an organizational subunit that does not perform well. For example, a manager may do a great job of closing down a loss-making branch or subsidiary.

Performance and measurement

As Lord Kelvin once said, "If you cannot measure it, it does not exist." As we have said, performance is multifaceted and encompasses elements describing both the results and the processes creating the results. However, the descriptors, the qualitative and quantitative measures, are mere surrogates of performance. They should not be mistaken for performance itself (Euske, 1983). Accounting definitions and measures of performance are but synthetic representations of decisions that were made previously by managers and that can be visualized as parts of the "performance tree" of figure 6.1. It is important for management accounting to identify, measure and transmit data about these intermediate results, even though they may not be expressed in "accounting language". The management accounting process is a mechanism to provide legitimacy to what may be estimations or forecasts. These estimates and forecasts may be better descriptors of the process than accounting data.

Accounting data or quasi-accounting data are provided to the manager for his or her information. They need not be used if the causal model used does not require them. However, the causal model may not be permanently relevant, and sometimes intuitions derived from the data will lead to an update of the causal model to reflect the rapidly evolving markets and technologies. Therefore, it may be important to add to the complexity of measures or indicators, by recognizing that there will be two types of signals: those assuming that the model is still valid (efficiency and effectiveness, for example) and those allowing a verification of the continued relevance of the model.

Proposition 6.6

Performance exists only if outcome and results can be described or measured so that they can be communicated for someone to decide to do something within the shared model of causal relationships.

Proposition 6.7

The relevance of the causal model needs to be validated continuously, both within and without the organization.

Proposition 6.8

Performance indicators or measures should not be confused with what they only partially describe.

"Performance" is only a relative term

Performance corresponds to a potential for value creation. That value is to be created over a period of time. Any causal model must, therefore, specify a time frame, in addition to the decision parameters and a context. The context is comparative.

Performance measures and the underlying performance must be qualified as good or bad. No signal of performance is intrinsically either. There must always be a comparison to qualify the performance. If, for example, we consider that late deliveries are a parameter descriptive of an organization's performance, we cannot decide whether 10 per cent of orders being five days late is good or bad. We cannot even decide whether a reduction of late orders from 10 per cent to 5 per cent is really an improvement or not. In order to interpret these data, one has to know (or surmise) what competitors or other users of similar processes do. Performance cannot be taken out of its comparative context, as shown in figure 6.2.

In this figure, the solid line indicates that, over time, there is an absolute improvement in the service rate, defined as the percentage of late deliveries.

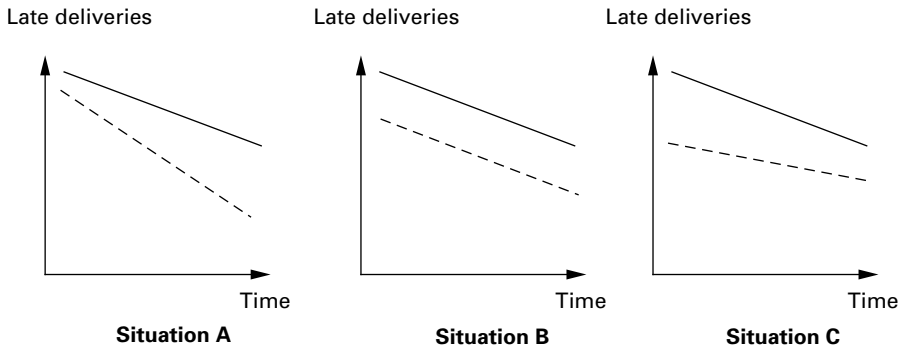

Figure 6.2: Performance is only relative

From a continuous improvement perspective, the change is clearly an improvement. From another perspective, however, the change in performance may not be a relative improvement. For instance, in the three situations described in figure 6.2, another organization using a similar or comparable process enjoyed a reduction of late deliveries shown by the dotted line. In situation A, the organization indicated by the solid line is losing ground relative to the other organization. In situation B, the relationship of the two organizations remains constant. Only in situation C is the gap between the two organization narrowing. The concept of performance only has meaning as part of a comparison.

Proposition 6.9

Performance is a relative concept, requiring judgement and interpretation. Performance is effecting a superior process or result relative to the referent. Choice of the referent is a significant decision with long-term consequences. The relatively superior position could be short- or long-term and over few or many indicators. Contradictions among the temporal measures and the other indicators are inevitable. Performance will again be in an interpretative context, in which managers or users of information will decide on the key parameters of performance.

Performance can be managed

As mentioned above, measuring parameters descriptive of performance makes sense only if the data are to be used in making decisions. The decisions can relate to both strategic orientations and steering the organization in the implementation of the strategic intent. The decisions contribute jointly to the creation (i.e. the management) of performance.

In order to achieve performance, the causal model has to be defined in terms of leading indicators. Lagging indicators provide only history; leading indicators allow for the creation of the conditions for fostering performance. In order to maintain the validity of the leading indicators, the model must be continuously validated for its relevance. This validation must also be as "leading" as possible (i.e. incorporate the most current information pertaining to the causal model and its parameters).

Performance management requires that procedures be put in place that allow the evolution of the organization and of its management system in

line with the evolution of its environment. Therefore, in order to manage performance one must:

- describe the value creation process in its context and time (propositions 6.1 and 6.2);
- share this model with all relevant actors (proposition 6.4);
- partition and allocate decision rights on the basis of this model (proposition 6.5);
- identify and select the descriptive indicators both for results and for steps to creating the results (propositions 6.3 and 6.4);
- document these indicators through an appropriate information system (proposition 6.6);
- choose the reference for benchmarking and external validation (propositions 6.7, 6.8 and 6.9);
- evaluate the signals and messages coming from each indicator (proposition 6.8); and
- identify, evaluate and implement all actions likely to improve the likelihood that the result will be coherent with the strategic intent (propositions 6.7, 6.8 and 6.9).

Conclusions

Performance is not just something one observes and measures; it is the result of a deliberate construction. Performance is a relative concept, defined in terms of some referent employing a complex set of time-based and causality-based indicators bearing on future realizations. Performance is about the capability of generating future results. The capability of generating future results can be described through a causal model. Each part of the model can, in turn, be subjected to an analysis.

Performance is meaningful only when used by a decision maker. It is specific to the individual's needs and interpretation. A domain of responsibility defines the parameters of performance that are relevant and, conversely, performance defines a domain of responsibility.

Finally, the specific meaning that performance takes in an organization should be the result of extensive discussions between the various managers or decision makers of the organization. The goal of the discussions is to identify a coherent set of causal relationships and select a common set of indicators so that coordination of all the actors takes place and generates

value such that, in the end, stakeholders define performance from their own point of view.

This definition of the performance creation process highlights the importance of creating alignment as a basic condition for an efficient use of resources and an effective trend towards the fulfilment of strategic intent.

Performance management is the process of creating alignment. Some of the best-known processes leading to such alignment are dialogue-based and de-emphasize local optimization, focusing on the development of integrated business processes

Figure 6.1 shows the conceptual three-step approach and highlights the fact that, unless foundations (positions, views and beliefs) are well understood and managed, outcome and results can hardly be modified.

References

Baird, L. (1986). *Managing Performance*. New York: John Wiley.

Bourguignon, C. (1995). Peut-on définir la performance? *Revue Française de Comptabilité*, 269, 60–5.

Bruns, W.J., Jr. (1992). *Performance Measurement, Evaluation and Incentives*. Boston: Harvard Business School Press.

Corvellec, H. (1994). Performance: from one language into another or the mutations of a notion. Paper presented at Seventeenth European Accounting Association Annual Congress, Venice, 6–8 April.

(1995). *Stories of Achievements: Narrative Features of Organizational Performance*. Lund, Sweden: Lund University Press.

Euske, K.J. (1983). *Management Control: Planning, Control, Measurement, and Evaluation*. Reading, MA: Addison-Wesley.

Euske, K.J., Lebas, M.J., and McNair, C.J. (1993). *Best Practices in World Class Organizations*. Burleson, TX: Consortium for Advanced Manufacturing - International.

Fligstein, N. (1990). *The Transformation of Corporate Control*. Cambridge, MA: Harvard University Press.

Johnson, H.T. (1990). Beyond product costing: a challenge to cost management's conventional wisdom. *Journal of Cost Management*, 3(3), 15–21.

Kaplan, R.S., and Norton, D.P. (1992). The balanced scorecard: measures that drive performance. *Harvard Business Review*, 70(1), 71–9.

Lebas, M.J. (1995). Oui, il faut définir la performance. *Revue Française de Comptabilité*, 269, 66–71.

Ministère de l'Industrie (1993). *Guide de la performance industrielle*. Paris: Ministère de l'Industrie, Délégation à l'Information et à la Communication.

Neely, A.D., Gregory, M.J., and Platts, K.W. (1995). Performance measurement system design: a literature review and research agenda. *International Journal of Operations and Production Management*, 15(4), 80–116.

Richard, J. (1989). *Audit des performances*. Paris: La Villeguérin.

RSA (1995). *Tomorrow's Company: The Role of Business in a Changing World*. London: Royal Society for the Encouragement of Arts, Manufacture and Commerce.

Rumler, G.A., and Brache, A.P. (1990). *Improving Performance: How to Manage the White Space on the Organization Chart*. San Francisco: Jossey-Bass.