Organizational Diagnosis: Its Role in Organizational Learning

Michael Beer and Bert Spector

Diagnosis can be a process that helps organizations enhance their capacity to assess and change dysfunctional aspects of their culture and patterns of behavior as a basis for developing greater effectiveness and ensuring continuous improvement. The authors set forth a framework for understanding what can be called a "learning diagnosis" in which the diagnostic process is part of a large-scale organizational revitalization effort. In particular, they explore how the diagnostic intervention is affected by the diagnostic consultant, by the top management sponsors of the intervention, and by the process of collecting and acting on data. They conclude with a discussion of both the opportunities and challenges of institutionalizing the learning diagnosis process.

Call it escalation of commitment, organizational defensiveness, learning disability, even—more bluntly—executive blindness. It is a phenomenon of behavior in organizations that has been widely recognized (see, for instance, Argyris, 1990; Senge, 1990; Shaw, 1981; Solomon, 1991). Organizational members become committed to a pattern of behavior. They escalate their commitment to that pattern out of a sense of self-justification. In a desire to avoid embarrassment and threat, few if any challenges are made to the wisdom and viability of these behaviors. They persist even when rapid and fundamental shifts in the competitive environment render these patterns of behavior obsolete and destructive to the well-being of the organization.

Executive blindness may not be a new phenomenon, but it is increasingly causing problems. The competitive environment is currently in the midst of precisely the kind of sea change that demands new patterns of behavior from organizational members. The relatively placid environment that nurtured United States industry in the post-World-War II years included large U.S. oligopolies dominating war-ravaged Japanese and Western European economies, relatively slow technological change, and highly regulated domestic industries. That environment bred mechanistic, command-and-control types of organizations (Walton, 1985).

Today's intense global competition and deregulation have created much higher uncertainty for firms in virtually every industry. Increased competition mandates a constant response to initiatives by other firms. It calls for continuous improvement of quality and products while controlling costs. At the same time, transnational organizational structures demand unparalleled levels of cross-cultural coordination (Bartlett & Ghoshal, 1989; Dertouzos, Lester, & Solow, 1989; Hayes, Wheelwright, & Clark, 1988; Piore & Sabel, 1984; President's Commission on Industrial Competitiveness, 1985; Scott & Lodge, 1985). These new external demands are overwhelming the capacity of command-and-control organizations to respond. What is required is a flexible and adaptive organization, as well as different patterns of behavior on the part of all organizational members.

If fundamental shifts in patterns of behavior are required, then the need to find ways for breaking through long-standing patterns of behavior becomes all the more urgent. *Diagnosis* can be an instrument for penetrating organizational defensiveness and for learning new patterns of behavior. It can be a process that helps organizations by doing the following:

1. Enhancing their capacity to assess and change the culture of the organization
2. Providing an opportunity for organizational members to acquire new insights into the dysfunctional aspects of their culture and patterns of behavior as a basis for developing a more effective organization
3. Ensuring that the organization remains engaged in a process of continuous improvement

If diagnosis can provide these opportunities, it becomes an indispensable step in the process of organizational revitalization.

The three aforementioned attributes of diagnosis certainly do not apply to all diagnostic interventions used by organizations. We recognize, for instance, that diagnosis is often used to address more particular, nonsystemic concerns. Diagnostic intervention models exist, for instance, to evaluate the motivational impact of jobs (Hackman, 1977; Hackman & Oldham, 1975), reward systems (Lawler, 1977), and control systems (Lawler & Rhodes, 1976).

Nevertheless, we are setting forth as our purpose in this article the exploration of diagnosis as an organic part of a process of large-scale organizational revitalization. We set forth a framework for understanding what can be called a "learning diagnosis," that is, a diagnostic process that engages organizational members at the level of patterns of behavior and fundamental values and assumptions. In doing so, we address as our primary audience individuals, either internal or external to the organization, engaged as consultants to facilitate the diagnostic process. At the same time, we recognize the importance of that

consultant's forging a strong partnership with key line managers and other critical organizational stakeholders.

DIAGNOSIS AND LEARNING ORGANIZATIONS

Diagnosis has traditionally been defined as one of the key events or stages in an organization development process. Diagnosis is an intervention that develops information about the various subsystems of an organization as well as the processes and patterns of behavior that take place within that organization (Beckhard, 1969). As one of the discrete stages of an organization development intervention (Kolb & Frohman, 1970; Porras & Berg, 1978), diagnosis is designed to generate data on the current state of the organization and the interrelationship between how the organization is functioning and how it is performing (French & Bell, 1984). The process of collecting that data serves to motivate organizational members to engage in change (Aldefer & Brown, 1975), while simultaneously providing a direction for that change (Nadler, 1977). Aldefer (1976) has suggested that the diagnostic process itself can be understood as a three-stage intervention within a larger change effort: (a) the process of publicly entering a human system, (b) the collection of valid data about human experiences with that system, and (c) the feeding back of that information to the system to enhance understanding of that system by its members.

Although the literature addresses a multitude of diagnostic approaches and techniques, there seems to be a relatively standard set of activities thought to be part of an effective diagnostic intervention:

1. The diagnostic intervention is triggered when some group, usually top management, admits the organization has a problem that needs to be addressed (Argyris, 1970; Manzini, 1988).
2. Some combination of internal and external agents begins a data collection process involving a variety of techniques to help identify the sources of the problem (Fordyce & Weil, 1983; Kolb & Frohman, 1970; Mann, 1957; Mann & Likert, 1952; Porras & Berg, 1978).
3. The information-collecting process is targeted to data that organizational members perceive to be valid (Beer, 1980; Nadler, 1977).
4. The diagnostic process concludes as the results of the intervention are fed back to organizational members who then take corrective actions (Nadler, 1977; Porras & Berg, 1978).

Inherent in this list of diagnostic stages is a choice concerning focus and scope. The scope of the diagnosis can be either narrow and symptomatic or broad and systemic. A narrow, symptomatic diagnosis involves a quick "radar scan" involving a superficial look at trouble spots in the organization (Tichy, 1983). This radar scan corresponds to the first level of what Harrison (1988) has suggested is a hierarchy of diagnostic goals: a process that is designed to provide information about particular problems or evaluations of specific efforts and initiatives.

Thinking about organizations as learning systems leads to the first proposition concerning learning diagnosis: *Learning diagnosis must target the entire organizational system if it is to have any long-term impact on effectiveness.*

Systems thinking is based on two fundamental premises. The first is that organizations exist in a constant state of interaction with their external environment. When that external environment undergoes a profound transformation, as is currently the case, organizational systems must respond to that change to remain effective. The second premise is that organizations are composed of multiple parts and components, both the structural subunits of an organization as well as dimensions like people, processes, design, and culture. These components exist in a state of constant interaction with each other, while at the same time remaining part of an identifiable whole.

The critical insight of systems thinking lies in its emphasis on interactivity and interdependence. Effectiveness resides not in any one independent component of the organization, but rather at the interface between many factors. Accordingly, when guided by a systems view of organizations, one will not look at discrete units or issues. Rather, one will focus on the "joints" of an organization, the places where the organizational processes come together.

In approaching organizations as systems, diagnosticians benefit from a framework that directs attention to these critical interactions. That framework serves much the same purpose (e.g., Tichy, Hornstein, & Nisberg, 1977) as a physician's model that directs diagnosis by identifying the critical activities and interactions that need to occur to maintain a body's well-being:

> The physician conducts tests, collects certain vital information on the human system, and evaluates and interprets this information based on his model. Once the diagnosis is made, the model guides the selection of the appropriate medical intervention. An organization model is used in a similar fashion to guide the collection of information, its analysis, and the selection of interventions. (p. 363)

The framework provides the guidelines for choosing what to attend to in collecting diagnostic information about the organization and for arranging the collection of information into meaningful patterns.

Many particular frameworks exist to help diagnosticians analyze organizational effectiveness (see, for instance, Beer, 1980; Galbraith, 1973; Lawrence & Lorsch, 1969; Leavitt, 1965; Lippitt, Langseth, & Mossop, 1985; Miles & Snow, 1978; Nadler & Tushman, 1977; Tichy, 1983; Weisbord, 1978). Perhaps the most recognizable framework currently is one that emphasizes the "7-Ss" of organizations: strategy, structure, systems, staff, style, skills, and shared values (Waterman, Peters, & Phillips, 1980).

What makes the 7-Ss or any other framework an effective road map is that it leads toward systemic thinking that focuses data collection, analysis, and discussion on four interdependent sets of interfaces:

1. Between individual, group, and organizational patterns of behavior
2. Both horizontal and vertical, between as well as within all the various subunits in the organization
3. Between organizational processes and outcomes
4. Between the organization and its external environment

Lacking a systems view to guide diagnosis, the process will ultimately flounder. Steps to correct individual problems will be undermined as other parts of the system resist, allowing the organization's well-developed, long entrenched immune system to attack and repel such challenges to the status quo. "It is difficult, perhaps impossible, to make significant progress in one area [of the organization] without making progress in others as well" (Waterman et al., 1980, p. 18).

Accordingly, the diagnostic process takes as its target, at least in its initial stage, the most systemic of Harrison's (1988) hierarchy of diagnostic goals: a process that seeks to assess organizational effectiveness, to discover ways of improving that effectiveness, and to contribute to the ability of the members of the organization to address and solve future problems.

The notion of an organization as a complex system is derived, in

part, from our understanding of organizational culture, which Schein (1990) defined as the following:

> (a) a pattern of basic assumptions, (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore, (e) is to be taught to new members as the (f) correct way to perceive, think, and feel in relation to those problems. (p. 111)

Patterns of behavior, in other words, arise from the underlying values and assumptions that seem valid within an organization.

Culture, then, is by definition backward looking. The assumptions, and the behaviors those assumptions lead to, are derived from what is thought to have been effective in the past. When the environment changes and places an entirely new set of demands on the organization, what has worked in the past will not necessarily work in the future. As a relatively placid environment dissolves into extreme fluidity, the organization's culture becomes part of the problem that diagnosis must address.

Taking aim at a culture that has led to past successes, however, will not be easy. In part, that is because culture is such a diffuse and vaguely understood and analyzed concept under the best of circumstances (Schein, 1990). Tackling and attempting to change organizational culture, however, is not ever likely to occur under some ideal best of circumstances condition. Instead, any effort to significantly transform an organization's culture is unlikely to be welcomed by members of the organization. After all, they have been part of the process both of creating the culture and of passing it on. Attempts to raise questions about underlying values and assumptions will be seen both as potentially embarrassing to some members and threatening to their past competencies and to their current positions. Additionally, in hierarchical organizations, members will inevitably fear the consequences of challenging entrenched authority and the status quo.

Culture, then, is the problem that diagnosis must address. To avoid embarrassment, threat, and fear, however, organizational members engage in what Argyris (1990) called "defensive routines" to ensure that the fundamental values and assumptions of the organization, and the patterns of behavior to which they lead, do not get discussed candidly and dealt with effectively:

> Organizational defensive routines make it highly likely that individuals, groups, intergroups, and organizations will not detect and correct the errors that are embarrassing and threatening because the fundamental rules are (1) bypass the errors and act as if they were not being done, (2) make the bypass undiscussable, and (3) make its undiscussability undiscussable. (Argyris, 1990, p. 43)

Thus, what is most critical to understand and change as a response to a changing external environment becomes *undiscussable*. In addition, the process of defensiveness continues to bury what is most important in organizational life from examination, understanding, and corrective action. Simply said, defensiveness makes learning impossible.

A *learning organization* is the antithesis of a defensive organization. A learning organization is a place where members expand their ability to be effective, that is, to achieve the goals they desire. Organizational members reconceive themselves and their relationships to and within the organization. This reconception of relationships is fundamental to Senge's (1990) definition of a learning organization:

> At the heart of a learning organization is a shift of mind—from seeing ourselves as separate from the world to connected to the world, from seeing problems as caused by someone or something "out there" to seeing how our own actions create the problems we experience. A learning organization is a place where people are continually discovering how they create their reality. And how they can change it. (pp. 12–13)

In learning organizations, concerns over embarrassment, threat, and fear must be overridden. These organizations must find a way to imbue their members with the willingness, skills, and ability to engage their blindness and penetrate their defensiveness.

The mandates of a learning organization lead to the second proposition concerning learning diagnosis: *Learning diagnosis must do more than simply add new information to the organization; it must help organizational members acquire the willingness, skills, and ability to discuss the undiscussable.*

The degree to which the diagnostic process helps lead the organization toward learning is affected by three key elements of the process:

1. The role played by the diagnostic consultant
2. The sponsorship role played by top management
3. The process of collecting the data, discovering its meaning, and acting on it in a way that allows continued, ongoing discovery and learning

It is to those three particular elements of the process that we can now turn our attention.

The Role of the Consultant

If learning diagnosis is the process of breaking through blindness and defensiveness, then the role of the consultant in that process becomes clear, leading to our third proposition: *In a learning diagnosis, the consultant closely aligns the diagnostic intervention with the critical strategic tasks of the organization.*

Research into large-scale organizational revitalization indicates that the motivation to change within managers is likely to be generated by the degree to which the change process addresses the critical strategic tasks of the organization (Beer, Eisenstat, & Spector, 1990). *Task alignment* suggests that diagnosis, which takes as its starting point the question of how the organization can perform its strategic tasks more effectively, may provide a powerful imperative for overcoming defensiveness. The consultant who helps managers see the interconnectedness of their behaviors—both as individuals and as members of a management group—can help overcome defensiveness by increasing dissatisfaction with the status quo, by motivating managers to address issues they might otherwise be more comfortable ignoring, and by providing a task-based context and framework for discussing difficult and sensitive interpersonal matters.

Diagnosis, then, can follow the principles of task alignment, taking as its starting point the question of how to perform the critical tasks of the organization more effectively. Task alignment, however, is unlikely to entirely eliminate defensiveness and blindness. Therefore, the consultant can and must work to mitigate their crippling impact. Consultants do so by becoming facilitators of a process that involves mechanisms for candid appraisal by organizational members. Those mechanisms (e.g., interviews, questionnaires, feedback sessions) offer employees an opportunity to step outside of their daily activities and interactions and to voice significant concerns.

The mere creation of mechanisms is not likely to overcome long-standing reluctance. A large part of the facilitator role involves estab-

lishing ground rules that directly address concerns about embarrassment, threat, and fear. Employees must learn rules of giving effective feedback to reduce, if not eliminate, defensiveness (e.g., be nonevaluative, focus on specific behaviors and their impacts, avoid attribution of motivation). At the same time, receivers of feedback must understand that certain responses will signal high levels of defensiveness to the feedback provider. If the receiver defends, justifies, or denies actions, the provider is likely to back off, reinforcing the defensiveness cycle. On the other hand, responses that request clarification or explore others' perceptions of the feedback are likely to reduce defensiveness and lessen concerns with embarrassment and fear (Anderson, 1983).

Therefore, consultants become both teachers and monitors of effective, nondefensive communication skills. They must also recognize that concerns with embarrassment, threat, and fear are related to the ground rules under which diagnosis proceeds. Specific guidelines will have to be agreed to and spelled out in advance (e.g., no direct attribution of quotes or even views, no punishment for the bearers of bad news). Only with the absolute sign-on by the sponsors of the diagnosis, usually top management, will diagnosis have any chance for penetrating organizational defensiveness.

The role of facilitator is likely to place internal consultants in an especially sensitive position. Although they may assume an outsider perspective, they are still unquestionably members of the organization. Issues of loyalty, job security, and career cannot be dismissed entirely. Internal consultants will find themselves caught between two forces. Organizational members are likely to wonder whether internal consultants represent a truly safe haven for the expression of controversial thoughts and opinions.

At the same time, the top management sponsors of the diagnostic intervention can take actions that compromise the consultant's independence. There may come a point when a top manager asks the consultant, "Based on what you've learned in the diagnostic process, should I promote [a specific manager] to a new position?" The consultant, whether internal or external, now has a difficult decision to make. To provide the requested information may compromise the integrity of the data collection process. If the consultant's compliance becomes public knowledge, defensive routines are likely to replace candor. To refuse the requested information, on the other hand, raises another set of difficult questions. Because promotion and succession planning are such critical parts of a transformation process (Beer et al., 1990), is the consultant withholding valuable data from the decision-making process? Furthermore, will refusal to respond honestly undermine important relationships with top management?

Although we can provide no pat answers to these questions, we urge a response that engages the top manager in an analysis and discussion of the role requirements of the position being discussed and the individual characteristics needed to fill the position successfully. Then the consultant can lead the top manager through a discussion of the skills, background, experience, behaviors, and managerial style of the manager being considered. If the top manager does not have adequate data to engage in such a discussion, or if the consultant is aware of data that the top manager does not seem to possess, then the consultant can help the top manager design a process for collecting such data. On a more systemic level, the consultant can use this discussion as an opportunity for driving the point that the organization needs a more institutionalized approach to collecting staffing and succession data, an approach that includes data on managerial style as well as specific skills.

What we have been addressing up to this point is a balance between the insider and outsider roles of the consultant. There is another kind of balance that must be understood. Although consultants to a diagnosis act primarily as facilitators, they also bring with them some kind of expertise (e.g., in research methodology, in forms of analysis). Although consultants should recognize their ability to make an expert contribution, they must also understand the necessity of balancing their expertise role with the needs of organizational members to be involved in the diagnostic process. Our fourth proposition addresses this issue of balance: *Learning diagnosis is client based and consultant informed.*

If we think of the possible continuum of relationships between the consultant and organizational members, we can anchor the two end points with the terms *mechanistic* and *organic*, conforming with models of intervention set forth by Argyris (1970). The mechanistic approach to diagnosis would place the expert consultant in strict control of the process to duplicate a more purely scientific model of research. Organizational members play the role of information providers, whereas the expert-scientist determines the critical variables to be addressed, undertakes the analysis, and then provides the fruits of his or her discovery to organizational members. The categories measured and the instruments used conform to the needs of that expert-scientist.

At the other anchor on the spectrum lies a more fundamentally organic approach. Organizational members are full partners in establishing the dimensions of the intervention, in collecting the data, and in continuing to redefine the goals and procedures of the process. Just as important, organization members play a critical role in analyzing and determining the meaning of the data uncovered by the process and in deciding how the organization should respond to that data.

The matter of selecting between the mechanistic and organic models might be thought of in terms of contingencies. For example, when the target of the diagnosis is some facet of the organization controlled by a small group of top managers—structure, rewards, measurement—then consultant-centered diagnosis would be appropriate, whereas client-centered diagnosis would be more appropriate when the organizational problem involves core issues. Consultant-centered diagnosis can be more speedily administered, especially if high motivation for change already exists in an organization. Client-centered diagnosis will undoubtedly be more time consuming, but will increase employee motivation through involvement.

Revitalization, however, must focus on the organization's culture, so the process inherently involves core organizational issues. Furthermore, although speed is always likely to be important, a hurried diagnosis might well lead to a slow implementation of the changes that the diagnostic process suggests.

In the end, two contingencies are critical in supporting the organic approach:

1. The need to create momentum or motivation for change (Crockett, 1977; Harrison, 1988; Manzini, 1988; Weisbord, 1987)
2. The need to pass diagnostic skills from the expert to organizational members (Manzini, 1988)

The act of collecting and analyzing data will help mobilize the energies of organizational members to take corrective actions. The involvement of organizational members in the process allows them the opportunity to learn by practicing the diagnostic skills that can then become a permanent part of their job responsibilities. Conversely, the more mechanistic approach risks rendering the organization more dependent and submissive, and thus makes the data generated less relevant and essential to organizational members. Finally, by involving organizational members in the processes of open communication and confrontation of facts, organic diagnosis provides the opportunity to engage in the

problem-solving skills that will be required of an organization engaged in continuous improvement.

What might an organic diagnosis process look like? In a discussion of a recent client-centered and consultant-informed diagnostic intervention (Beer, Eisenstat, & Biggadike, 1991) the key elements involved data collection by a cross-functional employee task force trained and guided by consultants. Members of the task force interviewed representatives from across the company, asking interviewees to describe the specific management practices and organizational arrangements that either helped or hindered the organization from achieving its strategic goals. Employee interviewers probed into issues concerning the functioning of the top management team: their role, style, and behaviors.

After the task force collected data, members reported their results directly to the top management group. The employee task force organized its data around major themes that it had worked out earlier with the assistance of a consultant. The next stage involved the top management team's making sense of that data. Based on what they learned from the task force concerning barriers to effectiveness, they conducted their diagnosis, attempting to locate and articulate the causal factors that led to dysfunctional behaviors. The discussion was aimed at reaching a consensus on how the top team should change its patterns of management, how critical interdependencies of the system could be managed, what skills were needed in the key roles, and what structural, measurement, information, and reward systems might ultimately be put in place to support the specified behaviors.

The facilitation role played by the consultants involved setting the ground rules for open discussions, both in the initial feedback meeting and the ensuing discussions among the top management teams. Employees were trained in feedback techniques. The top management team was presented a set of guidelines to allow the clarification and exploration of potentially controversial information. As the discussion ensued, the consultants enforced previously agreed-upon rules of no blaming or punishing. Top managers were encouraged to avoid defending their actions, but only to ask questions for clarification and amplification.

The aforementioned approach was designed to promote movement toward a learning organization. The consultant informs the intervention by providing a framework for collecting and analyzing data that will allow an analysis of the organization as a system (Buchanan, 1967). That framework helps organizational members understand the interconnectedness of their own system. The consultant facilitates open discussion by setting, teaching, and enforcing ground rules. At the same time, the organizational members conduct the data collection, feedback, and discovery processes themselves, learning diagnostic skills by doing them.

The Sponsorship Role

Without the support of the group of key decision makers whose influence on the organizational system is the greatest, change is unlikely to be either successful or lasting. Ideally, that support should be present from the very first: at the diagnostic stage. Identifying the various political power bases in the organization is not necessarily an easy task. Glancing at a formal organization chart will, at best, tell only part of the story of where power and influence reside in the organization. Therefore, understanding who makes up the dominant coalition, what their domains and power bases are, and how and to what end they use their power should become part of the diagnostic process (Cobb, 1986; Kotter, 1978; Miles & Snow, 1978).

Learning diagnosis, however, demands more than support. Here we can add a fifth proposition concerning diagnosis: *Learning diagnosis requires a kind of dynamic sponsorship from top management that involves the willingness of these managers to allow their behaviors as individuals and as a group to be the target of the diagnostic intervention.*

Because a learning diagnosis targets the organization as a system, top management in the organization has a special role to play. Top managers are, after all, the group responsible for the health and effectiveness of the overall system. Accordingly, if learning diagnosis does not evaluate the impact the behavior and values of top management are having on organizational effectiveness, it will fail to produce the desired outcomes.

Dynamic sponsorship of the diagnosis requires that upper management both enable the process to proceed and take an active role in encouraging their own behaviors to be addressed. Convincing top managers of the necessity of holding up their behaviors to scrutiny will be no easy task. Managers tend to seek external responsibilities for the problems found in their organizations. "The enemy is out there" syndrome, as Senge (1990) called it, will work against effective change. By casting blame on others, top management risks overlooking one of the key barriers to effective learning: their own behaviors (Argyris, 1991). Scholars of learning organizations identify upper management, as well as the corporate staff to whom they turn for advice, as one of the key hurdles to overcome in creating a learning organization. It is these senior managers "who don't understand the true nature of the changes" (Hayes et al., 1988, p. 347) required to achieve competitiveness.

A perilous yet critical role for the consultant is thus suggested. In informing and guiding the diagnostic process, he or she must encourage management to perform what may well be an unnatural act: holding the diagnostic mirror up to its actions, behaviors, and assumptions as a critical part of the problem to be addressed.

Literature suggests that the readiness of key managers to engage in change is one of the key criteria for determining the probability of bringing a developmental effort to a successful conclusion (Beer, 1980). Indeed, it is the readiness of the client, far more than any specific methodology choices by the consultant, that helps determine the success of a change intervention. Client readiness, then, is a matter to which the consultant must pay heed. Our own experience suggests that readiness, particularly the readiness of top managers to admit the extent to which they are part of the problem, is not likely to be present at the outset. In its absence, the consultant needs to engage in continual pushing and probing: pushing a systemic view of organizational effectiveness and an understanding of the role played by top management and probing to determine to what degree readiness has evolved. If the consultant determines at any point in the process, including the outset, that such a degree of readiness is unlikely to be achieved, or if the client commences a process of disengagement during the intervention, then the consultant needs to consider seriously whether to end the diagnostic engagement.

The Diagnostic Process

The mechanics by which the diagnosis proceeds, no less than the going-in assumptions of the organizational sponsors and the outsider consultant, have an impact on the effectiveness of the diagnostic intervention. The effectiveness of diagnosis in mobilizing energy for change and asserting direction is powerfully influenced by the manner in which the intervention is conducted in three areas: data collection, discovery, and the feedback loop.

Data collection. Data collected by the diagnostic process can have a powerful impact on the organization, both by motivating organizational members to change their behaviors and by directing that change in ways that will likely lead to new patterns of behavior (Cammann &

Nadler, 1976; Nadler, 1977). The motivational impact of data occurs as feelings are roused and forces unleashed that bring about behavior change. The collection of data potentially becomes a key way of mobilizing the considerable energy needed to overcome commitment to the status quo.

The collection process, however, can and must do more than energize change, as important as that aspect is. Data collection can also be undertaken in such as way as to pass the skill along to organizational members. Thus, our sixth proposition focuses on both the motivational and the learning potentials of data collection: *In a learning diagnosis, the mechanisms for collecting data should be designed to maximize both the commitment of organizational members to the conclusions of the processes and the willingness and ability of organizational members to engage in future data collection and diagnosis.*

In looking at the employee task force process described earlier, there were many techniques they could have relied on for collecting data regarding the roadblocks to organizational effectiveness. Their choice of unstructured interviews fits more closely than do other approaches with the imperative to advance organizational learning. Not surprisingly, they did not use one of the most common data collection techniques: standardized, self-administered questionnaires. Those questionnaires often stress areas of behavioral interaction such as communication, goals, extent of participatory management, and coordination (see, for instance, Taylor & Bowers, 1972).

Questionnaires, however, are, at best, of limited effectiveness in the learning diagnosis. The preconceived categories represented in the questions may measure theoretical constructs that are relevant to the developer. Do they speak to the true needs of the organization, though? Schein (1990) warned that concepts of organizational culture are vague and not easily given to a priori analysis and understanding. It is unlikely, then, that categories conceived a priori for the purpose of designing a questionnaire will approximate any particular organization's reality.

Likewise, the knowledge gained from questionnaires will lack the kind of richness and texture necessary to understand the causal factors that underlie the organization's shortcomings. Fordyce and Weil (1983) emphasized the low likelihood that such data will support organizational learning and revitalization:

> [Questionnaires] do not create the kind of personal involvement and discussion that is so valuable in changing hearts and minds. The information gathered by questionnaires tends to be canned, anonymous, ambiguous, and detached. (p. 124)

One of the purposes of diagnosis is to clarify and raise employee levels of consciousness about problems so they will act on them. It is not likely that readiness to act will be high when the diagnosis is conducted using written questionnaires. Organizational members are likely to comply with the process by filling out questionnaires, but they will show little interest in the problems being diagnosed, and little willingness to provide honest, valid data and are not likely to be energized into action.

This is not to imply that survey instruments and questionnaires cannot play a significant role in an organizational change process. By providing a benchmark measurement against either other model organizations or against best-practice units within the organization, they can help build dissatisfaction with the status quo and awareness of the need for change (Spector, 1989). Nonetheless, when the primary purpose of collecting data is to change attitudes and behaviors, data collection methods are needed that involve organizational members in identifying and diagnosing problems. Traditional scientific concerns for measurement become less important than gaining awareness and commitment.

Manzini (1988) has pointed to the learning opportunities inherent in diagnostic interviews, most especially interviews that are unstructured, such as the ones conducted by the employee task force. Such interviews start with general questions. The open dialogue between the interviewer and interviewee helps determine the direction of the interview. In addition to generating data, such open-ended interviews offer the opportunity to clarify the data as they are being generated. The interviewer can ask questions of the respondent and probe more deeply into issues of concern. Such a process thereby enables, even encourages, discovery. Written questionnaires can only generate answers to specific questions that have been prepared ahead of the actual delivery of the data. Unstructured interviews, conversely, can probe into new, undiscovered, and unexpected areas of organizational interactions.

Enlisting organizational members to conduct interviews with fellow employees can have important advantages in moving the organization toward greater learning. The involvement of organizational members in the data collection process enhances their commitment to the changes suggested by the process. Also, organizational members inevitably know more about the hidden but critical aspects of organizational life than any outsider would. They bring, in other words, their own expertise to the process. Finally, by participating in the data collection process, organizational members are gaining the skills necessary to engage in ongoing data collection and diagnosis as an organic part of their management job.

Apart from interviews, another key source of data that cannot be overlooked are the observations and experience of the consultant. His or her ongoing interactions with the client can provide an indispensable source of data concerning the cognitive and emotional state of key organizational stakeholders. Consultants can conduct their own self-interviews concerning their interactions with the client. Are conversations with the client completely open and candid concerning both how the diagnostic process is proceeding and what the process seems to be uncovering? If not, is there at least a sense of movement toward openness and candor? In exploring his or her feelings and learnings regarding the client, the consultant accumulates rich and valid data concerning the readiness of the organization for change and the impediments to effectiveness.

The discovery process. Data collection is only a preliminary step of the diagnostic process, setting the stage for the work of analysis and action planning. The next step involves discovery, leading us to our seventh proposition: *In a learning diagnosis, the top management team enters into a dialogue based on the data collected and guided by a systemic framework to discover the root causes of the organization's problems.*

For discovery to occur, the data generated in the collection phase must be fed back to the top team for the purpose of bringing about change (Nadler, 1977). That data should be directed at the groups and teams empowered to take action. In the case of a systemic intervention in the organization, that is the top management team. Furthermore, the feedback should be provided in face-to-face meetings rather than through written reports to help provide the richness required to help organizational members understand the complexity of the problems as well as possible responses. As noted in our previous discussion of the employee task force model, consultants facilitated the process by helping employees organize the data conceptually. They facilitated the feedback session by setting guidelines for nondefensive communication.

After receiving the data, the top team must analyze and understand what they have heard. The consultants had two important roles to play in this process. They reinforced the notion of starting with strategy, then moving toward a complex, systemic understanding of the organization's

problems. At the same time, they continued to act as facilitators of open and active dialogue.

A recent discovery process in which the authors were involved as consultants relied on the 7-Ss framework (Waterman et al., 1980) to guide a systemic analysis. After agreeing on a strategy that involved global integration into a systems business, top management used data to test the degree to which the other aspects of the organization were strategically aligned. Among their conclusions were the following:

Systems. Reward systems encouraged individual efforts; management development systems bred narrow, functional specialists; and information systems prevented direct, real-time communication.

Structure. The organization was moving toward independent business units without structurally reinforcing the need for interdependence.

Skills. Managers had low skill levels in managing teams, both within their own functions and across functions.

Style. The predominant mode of behavior among managers was individualistic and punishing, with little open discussion of interpersonal and behavioral roadblocks to effectiveness.

Shared values. Organizational members placed high value on the entrepreneurial spirit that had worked so well in the past, but low values on general management, interpersonal, and leadership skills.

After reaching consensus that these aspects of their organization were interfering with their ability to achieve their strategic goals, the top team committed to action. Their ongoing role involved both dealing with the deficiencies in each aspect of the framework and overseeing the change process to ensure that all interventions moved the organization in the same direction.

When the discovery process occurs within the group empowered to take action, the framework provides a kind of map for discussing the complex and dynamic interconnectedness of their organization. As the consultant prods, questions, and challenges, the empowered organizational group can move toward a consensus about what will constitute effective performance by their organization in the future. With their action plan aligned to the critical tasks of the organization, group members can help each other learn and understand what decisions and changes will have to be made, both on their part and within the rest of the organization, to achieve the desired state.

Closing the feedback loop. The feedback process does not stop after informing management of the data collected in the diagnostic process. Our eighth proposition is the following: *In learning diagnosis, the responsible management individual or group should find mechanisms for reporting the results of its discovery process and its plan for action back to the organizational members who have participated in the process.*

The management group responsible for taking action can use this process of closing the feedback loop for more than simple one-way reporting of conclusions and action plans. Closing the feedback loop can provide a real-world test of the efficacy of the conclusions drawn and the plans laid.

As top management reports its conclusions, it can take the opportunity to continue to learn, this time from the reaction of organizational members to its plan. The desirability of continuing discovery in the feedback process may suggest that certain mechanisms would be best suited for closing the loop:

1. The feedback from the empowered group to the organization must be done in face-to-face sessions.
2. Either the entire group or representatives of the responsible group need to conduct the feedback sessions.
3. The conclusions and action plans presented should be framed as being tentative. Although the empowered group cannot cede its responsibility to make decisions and take action, it, nonetheless, must express and demonstrate willingness both to listen to responses and reactions and to incorporate those responses in its own thinking. These mechanisms can help ensure that discovery is a never-ending process.

INSTITUTIONALIZING DIAGNOSIS

Continuous improvement is "the ultimate test of a world-class organization" (Hayes et al., 1988, p. 25). The goal of managers should not be to achieve some ideal, optimal steady state. Rather, they should seek "persistent headway toward continual improvement in an evolving competitive environment" (Hayes et al., 1988, p. 271). That headway will depend on an ongoing open dialogue that penetrates defense mechanisms and allows learning and change to persist. In keeping with this need for continuous learning, we can state our ninth and final proposition: *Learning diagnosis should be institutionalized within the organization as a constant, ongoing process.*

It is possible to conceive what some elements of an institutionalized learning diagnosis would look like. The entire process of intervening in the organization to gather data, engage in discovery, and feed the results back to the organizational members would occur periodically and regularly. Explicit goals and expectations would be set for managers to engage in such a process. In addition, the organization would encourage and support the accumulation of the necessary diagnostic, discovery, and feedback skills by its managers. Unfortunately, studies of organizational change and development suggest a poor record in this regard (Beer, 1979; Walton, 1978). Even in the most successful transformation efforts, this institutionalization has not occurred (Beer et al., 1990).

Why has institutionalization been so difficult to achieve? Clearly, top management's role is critical. Top management must support such institutionalization in two ways. First, top management must support a climate that reinforces openness rather than defensiveness. In their day-to-day interactions with organizational members and without the presence of a facilitator, managers often return to the styles and behaviors that reinforced defensiveness in the first place. Candor, feedback, and learning all shut down.

A second imperative to support ongoing learning diagnosis is that organizations must hold managers accountable for engaging in the process if that process is to become an ongoing, institutionalized part of the organization's life. Such accountability could occur when a significant part of a manager's performance evaluation is based on ability and willingness to undertake diagnosis within her or his unit and among peers and subordinates. Likewise, succession planning and promotion could place a premium on the skills required of a learning diagnosis.

In hierarchical organizations, evaluation can be a two-edged sword. Without making the implementation of ongoing diagnosis an explicit criterion for evaluation, the process will not become institutionalized. Basing evaluation on diagnosis, however, may reinforce rather than lessen emotions of fear and threat. The manager may ask, "What if the diagnosis I conduct uncovers information about me that will be perceived negatively by my superiors? How will this negative information affect my position and career in this organization?"

When managers ask these kinds of questions, defensiveness replaces openness. There is a way out, of course. When top managers evaluate subordinates and hold them accountable for diagnosis, they must evaluate the quality of the process rather than the content of the feedback. Only when top managers understand and make that distinction will diagnosis ever become an institutionalized part of the ongoing processes in an organization.

The process of institutionalizing learning diagnosis is extremely complex and demanding, requiring a long-term, developmental perspective that many managers seem to find difficult to adopt or which inherent organizational forces tend to discourage. Ultimately, the failure to institutionalize diagnosis reflects a flawed learning process. Only when managers learn the centrality and criticalness of organizational interconnectedness, only when they come to appreciate fully that aligning the subunits of the organization is their critical task, will they be motivated to overcome both their own reluctance and the organizational impediments. It is only when the key caretakers of the organization reach that level of understanding that diagnosis will become an ongoing, institutionalized part of the everyday life and fabric of the organization.

REFERENCES

Alderfer, C. P. (1976). Boundary relations and organizational diagnosis. In L. Meltzer & F. Wickert (Eds.), *Humanizing organizational behavior* (pp. 109–133). Chicago, IL: Charles C Thomas.

Aldefer, C. P., & Brown, L. D. (1975). *Learning from changing: Organizational diagnosis and development.* Beverly Hills, CA: Sage.

Anderson, J. (1983). Giving and receiving feedback. In L. A. Schlesinger, R. G. Eccles, & J. J. Gabarro (Eds.), *Managing behavior in organizations: Text, cases, readings* (pp. 189–195). New York: McGraw-Hill.

Argyris, C. (1970). *Intervention theory and method: A behavioral science view.* Reading, MA: Addison-Wesley.

Argyris, C. (1990). *Overcoming organizational defenses: Facilitating organizational learning.* Boston: Allyn & Bacon.

Argyris, C. (1991). Teaching smart people how to learn. *Harvard Business Review, 69,* 99–109.

Bartlett, C. A., & Ghoshal, S. (1989). *Managing across borders: The transnational solution.* Boston, MA: Harvard Business School Press.

Beckhard, R. (1969). *Organization development: Strategies and models.* Reading, MA: Addison-Wesley.

Beer, M. (1979). The longevity of organization development. In B. Lubin, L. D. Goodstein, & A. W. Lubin (Eds.), *Organization change sourcebook I: Cases in organization development* (pp. 62–65). San Diego, CA: University Associates.

Beer, M. (1980). *Organizational change and development: A systems view.* Chicago, IL: Scott-Foresman.

Beer, M., Eisenstat, R. E., & Biggadike, R. (1991). *Developing an organization capable of strategy implementation and reformation: A preliminary test.* Unpublished manuscript.

Beer, M., Eisenstat, R. E., & Spector, B. (1990). *The critical path to corporate renewal.* Boston, MA: Harvard Business School Press.

Buchanan, P. C. (1967). *Critical issues in organizational development, in change in social systems.* Arlington, VA: NTL Institute for Applied Behavioral Science.

Cammann, C., & Nadler, D. A. (1976). Fit control systems to your management style. *Harvard Business Review, 54,* 65–72.

Cobb, A. T. (1986). Political diagnosis: Applications in organization development. *Academy of Management Review, 11,* 482–496.

Crockett, W. J. (1977). Introducing change to a government agency. In P. H. Mirvis & D. N. Berg (Eds.), *Failures in organizational development and change* (pp. 111–147). New York: Wiley.

Dertouzos, M. L., Lester, R. K., & Solow, R. M. (1989). *Made in America: Regaining the productive edge.* Boston, MA: MIT Press.

Fordyce, J. K., & Weil, R. (1983). Methods for finding out what's going on. In W. L. French, C. H. Bell, & R. A. Zawacki (Eds.), *Organization development: Theory, practice, and research* (pp. 124–132). Plano, TX: Business Publications, Inc.

French, W. L., & Bell, C. H. (1984). *Organization development: Behavioral science interventions for organization improvement.* Englewood Cliffs, NJ: Prentice-Hall.

Galbraith, J. R. (1973). *Designing complex organizations.* Reading, MA: Addison-Wesley.

Hackman, J. R. (1977). Work design. In J. R. Hackman & J. L. Suttle (Eds.), *Improving life at work: Behavioral science approaches to organizational change* (pp. 96–162). Santa Monica, CA: Goodyear.

Hackman, J. R., & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of Applied Psychology, 60,* 159–170.

Harrison, M. I. (1988). Hard choices in diagnosing organizations. *Journal of Management Consulting, 6,* 13–21.

Hayes, R. H., Wheelwright, S. C., & Clark, K. B. (1988). *Dynamic manufacturing: Creating the learning organization.* New York: Free Press.

Kolb, D. A., & Frohman, A. L. (1970). An organization development approach to consulting. *Sloan Management Review, 12,* 51—65.

Kotter, J. P. (1978). *Organizational dynamics: Diagnosis and intervention.* Reading, MA: Addison-Wesley.

Lawler, E. E. (1977). Reward systems. In J. R. Hackman & J. L. Suttle (Eds.), *Improving life at work: Behavioral science approaches to organizational change* (pp. 163–226). Santa Monica, CA: Goodyear.

Lawler, E. E., & Rhode, J. G. (1976). *Information and control in organizations.* Santa Monica, CA: Goodyear.

Lawrence, P. E., & Lorsch, J. (1969). *Developing organizations: Diagnosis and action.* Reading, MA: Addison-Wesley.

Leavitt, H. J. (1965). Applied organizational change in industry: Structural, technological, and humanistic approaches. In J. G. March (Ed.), *Handbook of organizations* (pp. 1144–1170). Chicago, IL: Rand-McNally.

Lippitt, G. L., Langseth, P., & Mossop, J. (1985). *Implementing organizational change.* San Francisco, CA: Jossey-Bass.

Mann, F. C. (1957). Studying and creating change: A means to understanding social organization. *Research in Industrial Human Relations, Industrial Relations Research Association, Publication No. 17,* 146–167.

Mann, F. C., & Likert, R. (1952). The need for research on communicating research results. *Human Organization, 11,* 15–19.

Manzini, A. O. (1988). *Organizational diagnosis: A practical approach to problem solving and growth.* New York: American Management Association.

Miles, R. E., & Snow, C. (1978). *Organization strategy, structure, and process.* New York: McGraw-Hill.

Nadler, D. A. (1977). *Feedback and organization development: Using data-based methods.* Reading, MA: Addison-Wesley.

Nadler, D. A., & Tushman, M. L. (1977). A diagnostic model for organizational behavior. In E. E. Lawler & L. W. Porter (Eds.), *Perspectives on behavior in organizations* (pp. 112–128). New York: McGraw-Hill.

Piore, M. J., & Sabel, C. F. (1984). *The second industrial divide: Possibilities for prosperity.* New York: Basic Books.

Porras, J. I., & Berg, P. O. (1978). The impact of organization development. *Academy of Management Review, 3,* 249–266.

President's Commission on Industrial Competitiveness. (1985). *Global competition: The new reality.* Washington, DC: U.S. Government Printing Office.

Schein, E. H. (1990). Organizational culture. *American Psychologist, 45,* 108–119.

Scott, B. R., & Lodge, G. C. (1985). *U.S. competitiveness in the world economy.* Boston, MA: Harvard Business School Press.

Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization.* New York: Doubleday.

Shaw, B. M. (1981). The escalation of commitment to a course of action. *Academy of Management Review, 9,* 577–587.

Solomon, J. (1991, December 29). Executive blindness latest consultants' focus. *Boston Globe,* pp. A23, A24.

Spector, B. A. (1989). From bogged down to fired up: Inspiring organizational change. *Sloan Management Review, 29,* 29–34.

Taylor, J., & Bowers, D. (1972). *Survey of organizations: A machine scored standardized questionnaire instrument.* Ann Arbor, MI: University of Michigan Institute for Social Research.

Tichy, N. M. (1983). *Managing strategic change: Technical, political, and cultural dynamics.* New York: Wiley.

Tichy, N. M., Hornstein, H., & Nisberg, J. (1977). Organization diagnosis and intervention strategies: Developing emergent pragmatic theories of change. In

W. W. Burke (Ed.), *Current issues and strategies in organization development*. New York: Human Science.

Walton, R. E. (1978). The Topeka story: Part II. *Wharton Magazine*, pp. 36–41.

Walton, R. E. (1985). From control to commitment in the workplace. *Harvard Business Review, 64*, 77–84.

Waterman, R. H., Jr., Peters, T. J., & Phillips, J. R. (1980). Structure is not organization. *Business Horizon, 23*, 14–26.

Weisbord, M. R. (1978). *Organizational diagnosis: A workbook of theory and practice*. Reading, MA: Addison-Wesley.

Weisbord, M. R. (1987). Toward third wave managing and consulting. *Organizational Dynamics, 15*, 4–25.

Michael Beer *is a professor at Harvard Business School, Boston, Massachusetts.* ***Bert Spector*** *is an associate professor in the College of Business at Northeastern University, Boston, Massachusetts.* *The authors thank Lorraine Tollen for her assistance in preparing this article.* *Correspondence regarding this article should be sent to Bert Spector, 304 Hayden Hall, College of Business, Northeastern University, Boston, MA 02115.*