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Harvard Business Review

No. 77502

HBR

SEPTEMBER–OCTOBER 1977

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Several years ago the top management of a multi-billion dollar corporation decided that Product X was a failure and should be dropped. The losses involved exceeded \$100 million. At least five people knew that Product X was in serious trouble six years before the company decided to stop producing it. Three were plant managers who lived daily with the production problems. The two others were marketing officials, who perceived that the manufacturing problems could not be solved without expenditures that would raise the price of the product to the point where it would no longer be competitive in the market.

There are several reasons why this information did not get to the top sooner. At first, those lower down believed that with exceptionally hard work they might turn the errors into success. But the more they struggled the more they realized the massiveness of the original mistake. The next task was to communi-

cate the bad news so that it would be heard above. They knew that, in their company, bad news would not be well received at the upper levels if it was not accompanied by suggestions for positive action. They also knew that top management was enthusiastically describing Product X as a new leader in its field. Therefore, they spent much time in composing memos that communicated the realities yet would not be too shocking to top managers.

Middle managers read the memos and found them too open and forthright. Because they had done the production and marketing studies that resulted in the decision to produce Product X, the memos from lower level management had the effect of questioning the validity of their analysis. They wanted time to “really check” these gloomy predictions and, if they were true, to design alternative, corrective strategies. If the pessimistic information was to be sent upward, they wanted it accompanied by optimistic action alternatives. Hence further delay.

Once the middle managers were convinced that the predictions were valid, they began to release some of the bad news, but they did so in measured doses. They managed the releases carefully to make certain they were “covered” if management became upset. The tactic they used was to cut the memos drastically and summarize the findings. They argued that the cuts were necessary because top management was always complaining about receiving long memos. The result was that the top received frag-

Why are employees reluctant to report to the top that one of their company's products is a “loser” and why can't the vice presidents of another company reveal to their president the spectacular lack of success of one of the company's divisions? The inability to uncover errors and other unpleasant truths arises from faulty organizational learning, says this author. Such habits and attitudes, which allow a company to hide its problems, lead to rigidity and deterioration. The author describes how this process can be reversed by a method he calls double loop learning.

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mented information underplaying the severity of the problem (not the problem itself) and overplaying the degree to which line middle management and the technical people were in control of the problem.

Top management, therefore, continued to speak glowingly about the product, partially to ensure that it would get the financial backing it needed from within the company. Lower level managers became confused and eventually depressed because they could not understand the continued top management support nor the reason for the studies that were ordered to evaluate the production and marketing difficulties they had already identified.

Their reaction was to reduce the frequency of their memos and the intensity of the alarm they expressed while simultaneously turning the responsibility for dealing with the problem over to middle management people. When local plant managers, in turn, were asked by their foremen and employees what was happening, the only response they gave was that the company was studying the situation and continuing its support. This bewildered the foremen, but led them to reduce their concern.

How Organizations Learn

I should like to use this case to explain a view of organizational learning. First, however, a few definitions and concepts are in order. **Organizational learning is a process of detecting and correcting error.** Error is for our purposes any feature of knowledge or knowing that inhibits learning. When the process enables the organization to carry on its present policies or achieve its objectives, the process may be called single loop learning. Single loop learning can be compared with a thermostat that learns when it is too hot or too cold and then turns the heat on or off. The thermostat is able to perform this task because it can receive information (the temperature of the room) and therefore take corrective action.

If the thermostat could question itself about whether it should be set at 68 degrees, it would be capable not only of detecting error but of questioning the underlying policies and goals as well as its own program. That is a second and more comprehensive inquiry; hence it might be called double loop learning. When the plant managers and marketing people were detecting and attempting to correct error in order to manufacture Product X, that was single loop learning. When they began to confront the question whether Product X should be manufactured, that was double loop learning, because they were now questioning underlying organization policies and objectives.

In this organization, as in many others, norms had developed that admonished people: "Do not confront company policies and objectives, especially those top management is excited about." Thus to communicate the truth upward about the serious problems of Product X would, in addition to confronting a company policy, violate an organizational norm. But in order for this norm to be followed it must have been protected by another norm that states, "You cannot openly confront norms that tell you not to confront policies and objectives." In other words, in order to maintain the first norm a lot of information about error hiding would have to be camouflaged. So we have norms embedded within norms that inhibit double loop learning.

The double bind

To complicate matters, when employees adhere to a norm that says "hide errors," they know they are violating another norm that says "reveal errors." Whichever norm they choose, they risk getting into trouble. If they hide the error, they can be punished by the top if the error is discovered. If they reveal the error, they run the risk of exposing a whole network of camouflage and deception. The employees are thus in a double bind, because whatever they do is necessary yet counterproductive to the organization, and their actions may even be personally abhorrent.

One common way to reduce the tension that results from conflicting aims is to begin to conceive of the error hiding, deception, and games as part of normal and organizational life. The moment individuals reach this state, they may also lose their ability to see the errors. This is one reason some employees are genuinely surprised and hurt when they are accused of behaving disloyally and immorally by those (usually outsiders) who discover the longstanding practices of error hiding.

Note what has happened. The camouflaging of technical errors is done by individuals using **acceptable human games and organizational norms. The hiding of every important instrumental error, therefore, implies the existence of human games, and these in turn imply the existence of games to hide the games.**

It is rare, therefore, that an organization is able to use double loop learning for its instrumental and policy issues if it cannot do so for the games and norms. The reason is that the games and norms act to prevent people from saying what they know about the technical or policy issues. The subordinates who knew about the problems of Product X did not say so directly because it would have violated organizational norms and games that everyone respected and played in order to survive.

Long-term problems

Under these conditions, if double loop learning occurs, it would be because of: (1) a crisis precipitated by some event in the environment (for example, a recession or a competitor producing a better product); (2) a revolution from within (a new management) or from without (political interference or takeover); or (3) a crisis created by existing management in order to shake up the organization.

These choices entail several long-range problems. First, the change usually comes long after its necessity has been realized by alert individuals or groups within the organization. The delay teaches these persons that their alertness and loyalty are not valued. Second, those who are not alert or not as involved are reinforced in their behavior. They learn that if they wait long enough and keep their reputations clean, someone else will someday take action. Third, change under crisis and revolution is exhausting to the organization. Fourth, such changes usually reinforce the factors that inhibit double loop learning in the first place. Hence, from the standpoint of organizational learning processes, there would be no change.

How Organizations Survive

What keeps organizations effective if all this is true? First, organizations are quite good at single loop learning. Second, since most private and public organizations are unable to learn by the double loop method, the costs can be built into the price or tax structures. But there may be a limit to price and tax increases, and this way out may be the road toward economic and political instability. Third, many people are struggling to counteract these processes of organizational rigidity and deterioration, especially at upper levels. The result is that in our society executives work overtime and employees work the regular hours. Fourth, the processes I am concerned about have only recently become so potent in advanced industrial societies that they cannot be ignored.

Thus an ongoing national survey of peoples' belief in the ability of organizations to get things done shows that public confidence reached a peak in the late 1960s, and since then it has been deteriorating. At the same time, information science technology and managerial know-how have continued to increase in sophistication.

Why is it that organizations appear to be less effective as the technology to manage them becomes more sophisticated? The answer is, I believe, that the management theory underlying the new sophisticated technology is the same as the one that created

the problem in the first place. Take New York City as an illustration. All types of new managerial committees and new leaders have been introduced to deal with the troubled fiscal situation. They are correcting many single loop errors, but, if we can judge from the newspaper accounts, they are having much more difficulty in confronting the double loop question. The newspapers have, for example, cited several instances where cuts in municipal service budgets had not been made nearly a year after they were promised. Or, if unions are now willing to forgo raises for their members in order to prevent layoffs, have they been helped to examine the errors in their thinking that led to the problems in the first place?

During the Lindsay administration, I talked with several of the top city financial people. Although finance is not my field, it was not difficult to see the games being played with budgets and to identify some of the possible dangers. When I raised some questions, they responded that I did not understand big city administration and politics. They insisted that no one would let a big city go bankrupt. **Double loop learning will occur only when these officials examine and alter their willingness to play financial games, which they know are counterproductive, as well as their assumptions that they will remain in control.**

Actually, this type of thinking is going on in all parts of our society. Doctors and lawyers know that medical and legal services are inadequate (especially for the poor), and that pressure is building to remedy the situation; yet they have resisted setting up machinery to evaluate how their own actions affect the distribution of their services.

Someday even our newspapers may suffer a reduction in their autonomy. I predict this because of what I found in the study of a leading newspaper. The top executives felt helpless in creating within their own organization the conditions they insisted should exist in the White House and in state and city governments.¹ And just as the existing climates in those governmental bodies might lead to corruption and distortion, I found the same to be true in the newspapers. Why should our nation protect the managers of a newspaper when they are unable to create the milieu they themselves argue is necessary if truth is to be served?

The final result ironically will also be counterproductive. Society will create agencies to monitor the organizations and the professions. But it is difficult if not impossible for outside agencies to monitor the quality of the learning processes without becoming enmeshed in the organization. If people from within

1. Chris Argyris, *Behind the Front Page* (San Francisco: Jossey-Bass, 1974).

an organization can hide these processes from their own superiors, how will an outside agency discover them? Why is double loop learning so rare? Asking this question is like asking why illness is so prevalent. A thorough answer would generate a network of interconnected factors so complex that it would seem unmanageable. I do not think, however, we have reached the point where the problem is no longer solvable.

Inhibiting Factors

Donald Schon and I have been conducting research that we believe has identified a few of the more critical factors that inhibit double loop learning in organizations.² In order to explain these findings, I must first introduce some concepts.

Model I assumptions

People have theories that they use to plan and carry out their actions. "If you want to motivate people to perform, pay them well and inspect their production closely" is an example of a proposition contained in many executives' theories for action.

Yet we found that few people are aware that they do not use the theories they explicitly espouse, and few are aware of those they do use. If people are unaware of the propositions they use, then it appears that they design for themselves private assumptions that are not genuinely self-corrective. Thus they are prisoners of their own theories.

If this finding sounds questionable, let me assure you that I was doubtful myself about our early results. But, as we began to develop a model of the assumptions we saw people using, which we call Model I (see *Exhibit I*), the pieces began to fall into place.

The validity of the theories that most people use to design and carry out their actions is tested by their effectiveness in achieving the values people hold. Schon and I have identified four basic values that people who operate by Model I assumptions always seem to strive to satisfy and that govern their behavior. They are (1) to define in their own terms the purpose of the situation in which they find themselves, (2) to win, (3) to suppress their own and others' feelings, and (4) to emphasize the intellectual and deemphasize the emotional aspects of problems.

To satisfy these governing variables, people tend to use unilateral behavioral strategies such as advocating a position and simultaneously controlling oth-

ers in order to win that position, controlling the tasks to be done, and secretly deciding how much to tell people and how much is to be distorted, usually to save somebody's face.

The reader can now begin to see why Model I theories of action might be difficult to correct. First, the actors do not invite confrontation of the inconsistencies within their theories or the incongruities between what they espouse and what they actually use. To do so would allow for the possibility that someone else could get control or that someone else could win, and negative feelings might be aroused—all violations of the governing variables.

The people observing the actor usually see and react to his or her inconsistencies and incongruities. However, they often hold the same theories of action, and so they say nothing, lest they upset the actor and be seen as insensitive and undiplomatic.

A practical example

These governing variables and behavioral strategies are deeply rooted. I was leading a seminar with 15 line officers of a large holding company (mostly presidents of divisions) and 8 financial officers of these divisions plus the headquarters financial officer and the head of the entire company. During the discussion, I began to realize that the line officers were seriously concerned that the financial types with their financial information systems seemed to be getting increasing power with the chief executive officers. The finance people, who sensed this concern and interpreted it as natural defensiveness, wished they could do something about it.

Because both groups wanted to correct the problem, I asked the line and financial officers each to write a short case. On the right-hand side of the page they were to write, in scenario form, how they would go about discussing the issue with their financial or line counterparts. On the left-hand side they were to write anything that they thought or felt about the situation but probably would not communicate. I then summarized the findings on both sides and presented these to both groups.

Some interesting patterns emerged from an analysis of the cases. In all 23 cases, the scenarios dealt primarily with skin-surface aspects of the problem. For example, the line officers focused on the frustrations connected with filling out so many forms, the inability to get financial results quickly enough, and yet being loaded—indeed overloaded—with information that they did not need. The financial officers, on the other hand, said the forms were complex because the banks demanded the information, or, if the reports were not coming out fast enough, they would try to speed them up.

2. Chris Argyris and Donald Schon, *Organizational Learning* (Reading, Mass.: Addison-Wesley, to be published).

Exhibit I Theories of action

Governing variables for action	Action strategies for actor	Consequences on actor and his associates	Consequences on learning	Effectiveness
I	II	III	IV	V
Model I				
1 Achieve the purposes as I perceive them.	1 Design and manage environment so that actor is in control over factors relevant to me.	1 Actor seen as defensive.	1 Self-sealing.	
2 Maximize winning and minimize losing.	2 Own and control task.	2 Defensive interpersonal and group relationships.	2 Single loop learning.	Decreased.
3 Minimize eliciting negative feelings.	3 Unilaterally protect self.	3 Defensive norms.	3 Little testing of theories publicly.	
4 Be rational and minimize emotionality.	4 Unilaterally protect others from being hurt.	4 Low freedom of choice, internal commitment, and risk taking.		
Model II				
1 Valid information.	1 Design situations or encounters where participants can be origins and experience high personal causation.	1 Actor seen as minimally defensive.	1 Testable processes.	
2 Free and informed choice.	2 Task is controlled jointly.	2 Minimally defensive interpersonal relations and group dynamics.	2 Double loop learning.	Increased.
3 Internal commitment to the choice and constant monitoring of the implementation.	3 Protection of self is a joint enterprise and oriented toward growth.	3 Learning-oriented norms.	3 Frequent testing of theories publicly.	
	4 Bilateral protection of others.	4 High freedom of choice, internal commitment, and risk taking.		

Note: Exhibit I taken from Chris Argyris and Donald Schon, *Theory in Practice* (San Francisco: Jossey-Bass, 1974.)

In both groups the information in the column of thoughts and feelings not discussed was central to the problem. For example, "Here comes the run-around again," and "Why don't they say that they want to control this place?" or "He [the financial man] demands reports to impress his boss."

Moreover, the members of each group knew they were withholding information and covering up feelings. They also guessed that the others were doing the same. However, information that each side considered incomplete or distorted was not up for discussion. If people could not discuss these issues, they still had to solve them, so they would have to make inferences about others' views. They could test infer-

ences only indirectly and were unable to discuss how they tested an idea.

Primary inhibiting loops

The example just mentioned illustrates one of the conditions people create when they attempt to solve double loop problems. All parties withheld information that was potentially threatening to themselves or to others, and the act of coverup itself was closed to discussion.

Thus it was highly probable that the people in each group would view much of the information they received from others as being inconsistent, vague,

and ambiguous. The detection and correction of error, under these conditions, is highly unlikely. To compound the problem, the qualities of inconsistency, vagueness, and ambiguity themselves are not discussable. Thus feedback loops are created that play a primary role in inhibiting double loop learning.

Schon and I have collected nearly 3,000 such cases from executives, government leaders, trade union officials, lawyers, architects, health professionals, ministers, and educators at all levels of education. Thus what I am talking about is not a characteristic solely of business managers. Nor, by the way, are these findings limited to capitalist nations. The data available indicate that people in socialist countries also use Model I.

I am not asserting simply that people do not behave according to what they consider to be their theories for action. That would not be a particularly new finding. I am saying that people espouse theories that they use to design and manage their actions, of which they are unaware. If people simply did not behave consistently with their own theories, then it might follow that the corrective action is to alter behavior. In a study of six corporate presidents, I found that trying to change behavior is not sufficient and indeed could lead to behavior that is transitory and superficial.³

For example, an overcontrolling president may learn to be less controlling without altering the Model I values that govern his behavior such as unilaterally controlling a situation and maximizing his chance of winning. Under these conditions the president may become undercontrolling by letting his subordinates alone, by "giving them their head." But, if difficulties arise, he will again behave in accordance with his private assumptions and will strive to regain unilateral control.

His subordinates will then conclude that the original reduction of control was probably only a tactic. In other words, under stress the president's old leadership style resurfaces because the assumptions underneath it have not been altered.

Changing private assumptions involves helping people to become aware of these internal maps; helping them to see how their present assumptions are counterproductive for the very kind of learning they need to be effective (for example, how to combine articulate advocacy of their views with questioning by others of these views); providing them with new assumptions that reduce greatly the counterproductive consequences; showing them how to move from old to new assumptions; and teaching them the skills

3. See my book, *Increasing Leadership Effectiveness* (New York: Wiley-Interscience, 1976).

necessary to implement the new behavior in work settings.

This may appear to be an overly rational approach to changing human behavior. My experience in actual seminars is quite the contrary. The emotional and intellectual aspects of the whole human being become involved. I will return to this point after I say more about the kind of world people create who use Model I assumptions to design their actions.

Secondary inhibiting loops

As we have seen, people create loops to protect the primary inhibiting loops, and so we have loops nested within loops that inhibit learning. Model I blinds people to their weaknesses. For instance, the six corporate presidents were unable to realize how incapable they were of questioning their assumptions and breaking through to fresh understanding. They were under the illusion that they could learn, when in reality they just kept running around the same track.

President A told the group that Vice President Z, whom he had viewed as a prime candidate to be the next president, was too submissive and did not show enough initiative. The presidents questioned A carefully, and they soon produced evidence that A might be the cause of Z's behavior. A was surprised and irked about his own lack of awareness, but he was pleased with the help he got. He invented a solution based on the new diagnosis, which was, in effect, "to lay off the vice president and give him more breathing space."

His colleagues were able to help A to see that the solution was simplistic. As one said, "If I were Z and you suddenly changed by letting me alone, I would wonder if you had given up on me." A, again surprised and irked, nevertheless learned. Next, he tried out the solution that he and the others finally designed, with his peers acting as Z. In all cases, what he produced was not what he and they had invented.

The point to this story is that A honestly thought that he was doing the right things. What he learned was that he did not have the skills to discover, to invent, to produce double loop solutions, and that he was unaware of this fact.

What happens is that people provide incomplete and distorted feedback to each other; each knows that this is the case; each knows that the other knows; and each knows that this game is not usually discussable. The second set of factors, therefore, that helps to create secondary inhibitions are the games people play in order not to upset each other. These games can become complex and spread quickly throughout an organization.

For example, the R&D people, not being able to meet a promised deadline, assure the top management that they have at least enhanced the state of the art. Then there are the budget games, such as "throwing the dead cat into the other department's yard." There is also the game of starting a crisis in order to get attention and to obtain more of the scarce financial resources.

These factors tend to reinforce each other. Eventually they form a tight system that inhibits individual and organizational learning. I call this a Model 0-1 (see *Exhibit II*) learning system, and I have found such a system in most of the organizations I have studied, both private and public, product- or service-oriented.

The result is that people are taught to have a limited set of maps for how they must act, and they erect elaborate, defensive smoke screens that prevent both themselves and anyone else from challenging either their actions or the assumptions on which they are based.

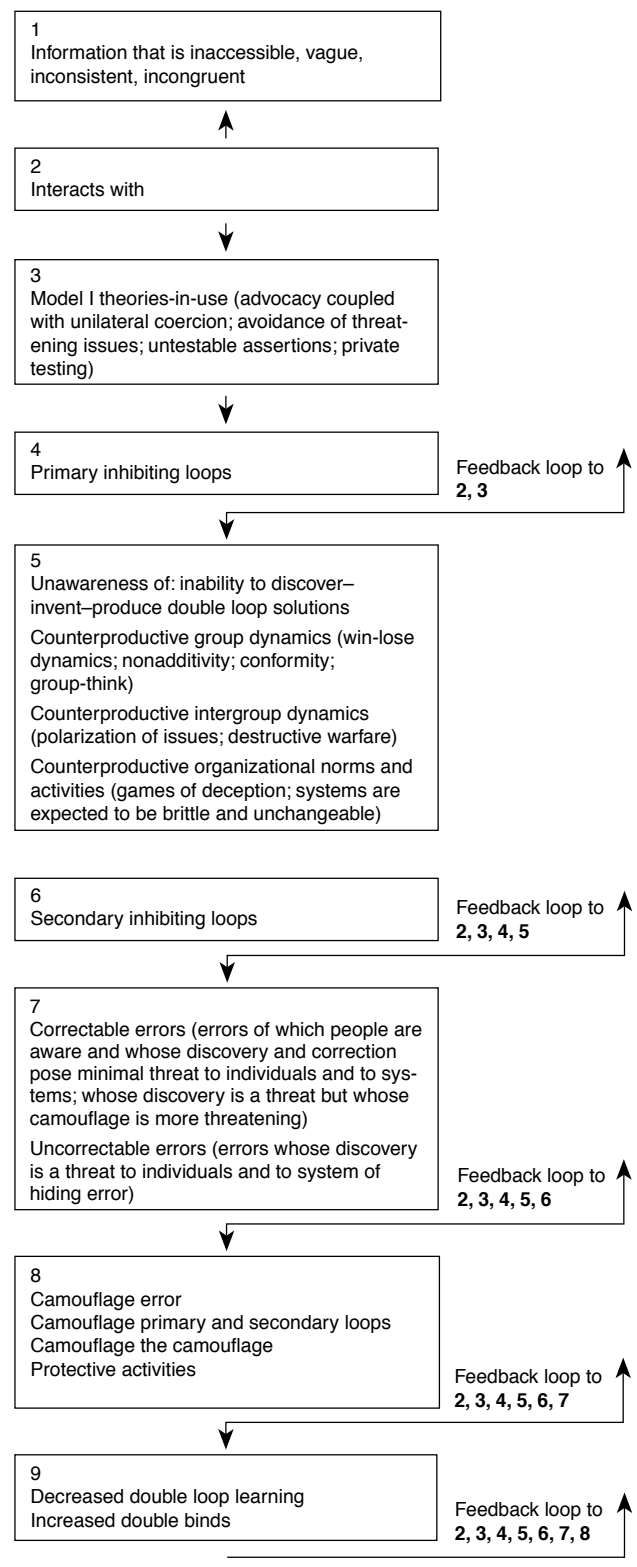
Changing the Learning System

There appear to be at least two different ways to alter Model 0-1 learning systems. The first is the use of workshops and seminars. The strategy is to get a group of people (usually away from the office) to sit down and level with each other. The sessions are managed by an expert in group dynamics and problem solving. The president gives his or her blessing and assures people that no one will be hurt if he or she speaks the truth. In well-designed sessions and where subordinates believe the president, the results are encouraging. Problems do come to the surface and get discussed. Moreover, solutions are devised, and schedules for implementation are defined.

But I do not know of any of these workshops (including those I have helped to design) where the unfreezing and the increased problem-solving effectiveness continued or extended to other problems. After a month or so back at home, the spirit seems to wane. Also, if someone tries to say something risky, it usually is accompanied by the comment, "In the spirit of our meeting...." The idea is to invoke the conditions of openness that had been created temporarily during the workshop.

The reason these workshops have little long-lasting impact is that they do not deal directly with the organizational learning systems that created or permitted the problems to arise in the first place. The first requirement for changing these learning systems is that people must develop internal as-

Exhibit II Model 0-1: Learning systems that inhibit error detection and correction



sumptions that are different from Model I. Model II shows such a result (see *Exhibit I* on page 118).

The underlying aims of Model II are to help people to produce valid information, make informed choices, and develop an internal commitment to those choices. Embedded in these values is the assumption that power (for double loop learning) comes from having reliable information, from being competent, from taking on personal responsibilities, and from monitoring continually the effectiveness of one's decisions.

Model II is not the opposite of Model I. For example, its governing values are not to accomplish the purpose as others see it or to give control to everyone, or to deemphasize the intellectual and emphasize the emotional aspects, at the expense of problem solving.

Significant misunderstandings have arisen in our society because this distinction was not taken seriously. Since Model I overemphasizes ideas and rationality, many in management education go to the other extreme and emphasize the expression of feelings even to the point of suppressing ideas. Not only is this polarization ineffective; it misses the point that feelings have meanings and meanings are intellectual phenomena. Without focusing on meanings it is not possible to ascertain whether feelings are valid or productive.

Another example of a misplaced emphasis is the recent push toward participation by employees in organizations, by citizens in communities, and by students in schools. The idea was to give these groups more power in the decision-making process. It was assumed that students or employees could enhance the effectiveness of the decision-making process. This policy overlooked the fact that such participation would probably increase the number of people with Model I assumptions, who, in turn, would create even more complicated learning systems.

If students and workers had genuinely different views, neither they nor the managers would deal with them effectively. We are now coming to realize that participation should be related to competence to solve problems effectively; and such competence in turn is related to internal assumptions, not to whether people are superiors or subordinates, male or female, young or old, or members of a minority or the majority.

A key result of using Model II is ability to combine the skills of advocacy with those of encouraging inquiry and confrontation of whatever is being advocated. For example, the presidents with whom I worked had little difficulty in being articulate or inviting inquiry, but initially they found it almost impossible to combine the two. Moreover, they predicted that their subordinates would not believe

them if they did combine the two, and that they would focus on advocacy and ignore the inquiry. The predictions turned out to be correct.

The Dilemmas of Power

The predisposition to polarize in order to ignore or to suppress dilemmas and paradoxes is a crucial problem for leaders trying to deal with double loop issues. Until recently, the inability to deal with the dilemmas was not critical because management had so many other problems to solve. The point is that the older and more successful a system is, the more likely it is that its participants will find themselves dealing with dilemmas and paradoxes that have been shunted aside during the early development of the system.

The "dilemmas of power" represent important issues for all future leaders. The six presidents identified several crucial ones for them: (1) how to be strong, yet admit the existence of dilemmas; (2) how to behave openly, yet not be controlling; (3) how to advocate and still encourage confrontation of their views; (4) how to respond effectively to subordinates' anxieties in spite of their own; (5) how to manage fear, yet ask people to overcome their fears and become more open; (6) how to explore the fear of understanding gear; and (7) how to gain credibility for attempts to change their leadership style when they are not comfortable with such a style.

Finally, Model II emphasizes the building of trust and risk taking, plus stating of positions in such a way that they are publicly testable so that self-sealing processes can be reduced.

It is not easy for people to move from Model I toward Model II because, as mentioned before, they tend to be unaware that they cannot perform according to Model II. Becoming aware of this fact tends to be frustrating to them, especially since they have always been taught that the basis for change is to understand and to believe in the necessity for it. But, as the presidents found out, understanding and believing in Model II did not ensure that they would be able to produce Model II behavior.

The other frustrating aspect was demonstrated in the presidents' seminar. The participants soon found that, while they were trying to help themselves and each other move toward Model II, they created a learning system that made it highly unlikely that they would ever succeed. So, in order to move toward Model II, the presidents had to examine the learning system that they had just created and begin to change it.

Moving ahead

In the new learning system people would advocate their views in ways that would invite confrontation, positions would be stated so that they could be challenged, and testing would be done publicly. Group and intergroup defenses would be dealt with as they arose. Games such as camouflaging information would be discussed when they were relevant.

The emphasis would be on double loop learning, which means that underlying assumptions, norms, and objectives would be open to confrontation. Also any incongruities between what an organization openly espoused as its objectives and policies and what its policies and practices actually were could also be challenged.

But underlying assumptions and governing variables cannot be effectively questioned without another set against which to measure them. In other words, double loop learning always requires an opposition of ideas for comparison.

As these new learning systems take hold, they tend to decrease the primary and secondary loops plus the organizational games that inhibit learning. This, in turn, should increase the amount of successful experience with double loop learning. People would then raise their aspirations about the quality and magnitude of change their organization can take.

Effects of the System

The reader may ask what difference this makes to the bottom line. I will show that it can make a difference, but first I should like to join those business executives and scholars who argue that the bottom line is not a tough enough criterion to use to evaluate the importance of double loop learning. It is not enough to ask, for example, what the profit of the company is. A tougher question is whether the company can continue to make a profit. Moreover, as we have seen with the rise of consumerism and corporate responsibility, if top management does not take a broader view of profit, legislation will be passed that will permit outsiders to require corporations to do so.

The second comment I would make is that research on double loop learning is in its infancy. To my knowledge, the experiment with the six presidents is the first of its kind anywhere. Also, apparently there is no organization of any kind that has a full-fledged model that goes beyond Model II. We have to implant these new learning systems to see how we can ensure their taking hold and growing. The best and toughest evaluation period for double loop learning in an organization is three to five years.

I believe that to argue that management does not have the time for such trials is wrong for two reasons. First, I do not believe that there is any real choice. If organizations do not become double loop learners (without revolutions and crises), they will be taken over. That will lead to disaster because, regardless of the organization that takes over, it, too, will not be a double loop learner. The second reason is that the transition does not require that an organization stop what it is doing. The capacity for double loop learning does not inhibit single loop learning; indeed, it usually helps it. So an organization does not threaten its present level of effectiveness by striving to become more effective in its learning.

I have followed the six presidents described for four years as they have attempted to introduce the new ideas in their organizations. Their task has been difficult, and they have made many errors. But, instead of hiding the errors, they are learning from them. This, in turn, provides a realistic model for the vice presidents, who have just begun to become aware of the new concepts.

In one of the companies, the vice presidents were able to tell the president that for years they thought that a certain division should be closed down but, because they felt the division was the president's pet interest, they presented the financial results to him so as to hide their belief. Once this situation surfaced, action was taken to close down the division.

During the recent recession the same group of officers were able to cut their expense budgets by 20% in record time and without hiding from each other what they were doing. The games of politicking and throwing the dead cat in the other group's yard were reduced. Moreover, since they were all significantly more committed to monitoring the new budget, the implementation was much more effective.

In another company, the chief executive officer decided to turn over the company he had started to a new president who was more managerially oriented than he. The vice presidents agreed that it would be a good idea, provided the founder would permit the new president to truly manage the company. To convince them that he meant business, the chairman withdrew almost completely.

After one year, it became apparent that the new president was a failure. Eventually, at the insistence of the executives and the banks, the chairman had to reenter the company and replace the president. The banks and several of the members of the board recommended strongly that the changeover be abrupt and without the advance knowledge of the vice presidents.

The chairman decided instead to deal with the problem in conjunction with the people involved. He asked the president if he wanted to join in the

The Pressure for Conformity

The spread of bureaucratic structures requires increasing conformity. This pressure reaches its highest form where corps of specialists are developed to uncover deviations and maintain records of merit and demerit. Here executives with festering egos demand superficial obeisance, if not a clear "yes." As all covertly battle for the enlarged package of honors and rewards that come at each higher level, seeming conformity is saintly and overt individualism is madness . . .

To deal with the world, the organization must present an inviting exterior and a promise of superior execution. Swamped in doubts, the leader must have assurance of internal loyalty when he acts. Conformity is one assurance he rewards. As T.H. Huxley noted in a famous letter to Herbert Spencer on the question of whether the remains of unconventional George Eliot should rest in Westminster Abbey, "Those who elect to be free in thought and deed must not hanker after the rewards . . . which the world offers to those who put up with its fetters."

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process of transition. The president wanted to have only one session with the vice presidents, after which he left.

The chairman held several sessions with the vice presidents, and they planned the transition in order to have a minimally disruptive effect upon the organization. The result was that the production and marketing errors were quickly corrected, and the company returned to a healthy financial status much sooner than expected. Equally important, to the chairman, was that the entire incident provided an opportunity to develop a much more cohesive top management team.

Finally, the presidents have shown important changes as human beings and as leaders. They all reported that they were less "tied up" inside and that they were more able to advocate what they believed while still inviting inquiry. They were all beginning to deal more effectively with the dilemmas of power.

It is not easy to create organizations capable of double loop learning, but it can be done. Even with minimal awareness the results are encouraging. The chief executive officer and his immediate subordinates are the key to success, because the best way to generate double loop learning is for the top to do it.