

Vroom's contingency model shows that the appropriate leadership style varies with the situation. Moreover, he demonstrates how the leader can learn (1) how to recognize the requirements of a situation and (2) how to tailor his style to meet these requirements.

Can Leaders Learn to Lead?

Victor H. Vroom

Like my fellow authors, I start with certain preconceptions. These preconceptions—some may call them biases—influence the way in which I view issues of leadership, particularly leadership training. I have tried to depict these preconceptions in Figure 1.

The central variable in this figure is the behavior of the leader, which I believe is determined by two classes of variables, attributes of the leader himself and attributes of the situation he encounters. Furthermore, I assume that many of the differences in the behavior of leaders can be explained only by examining their joint effects, including interactions between these two classes of variables.

The left-hand portion of the diagram is the descriptive side of the leader behavior equation. Much of my research has focused on these relationships in an attempt to understand the ways in which managers actually respond to situations that vary in a number of dimensions. If you examine the right-hand side of Figure 1, however, you encounter issues that are potentially normative or prescriptive in character. They deal with the consequences of leader behavior for the organi-

zation and here I share with Fiedler (and probably disagree with Argyris) a conviction that a contingency model is required. I do not see any form of leader behavior as optimal for all situations. The contribution of a leader's actions to the effectiveness of his organization cannot be determined without considering the nature of the situation in which that behavior is displayed.

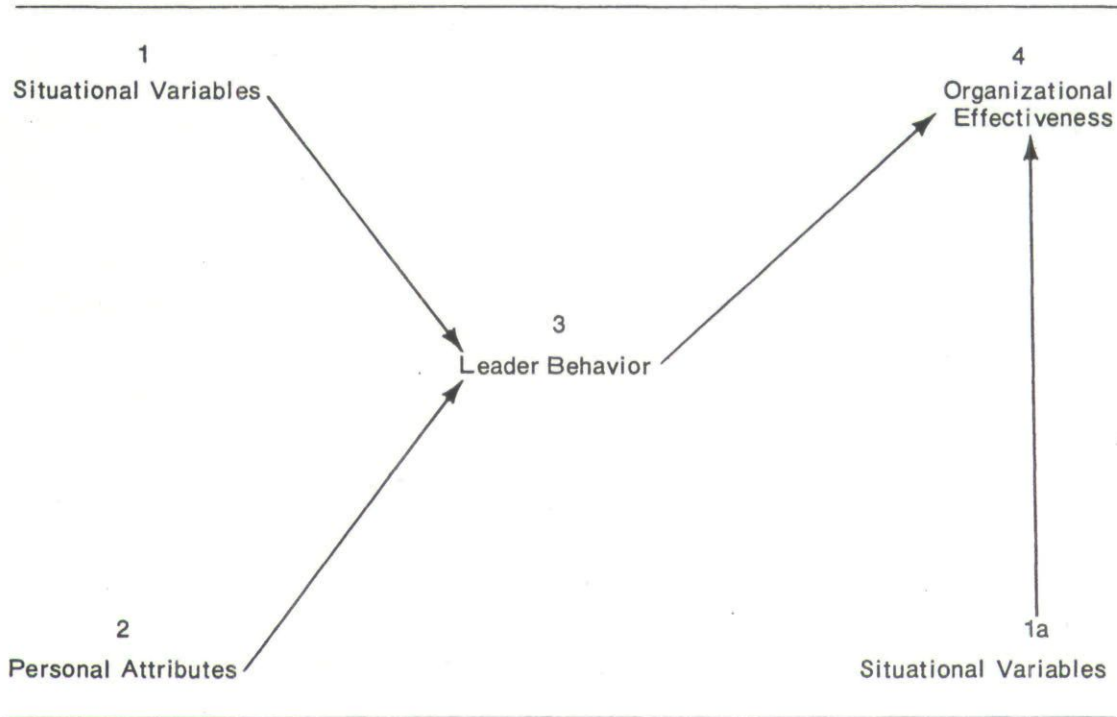
WORKING WITH THE CONTINGENCY MODEL

I am going to assume that most of you are familiar with the model that Phil Yetton and I developed and have described in detail in our recent book. As a normative model, it deals with the right-hand side of Figure 1, but it is a limited model because it deals with only one facet of leadership behavior—the extent to which the leader shares his decision-making power with his subordinates.

Figure 2 shows the latest version of our model. For purposes of simplicity, the presentation here is restricted to the model for group problems, that is, problems or deci-

Figure 1

SCHEMATIC REPRESENTATION OF VARIABLES USED IN LEADERSHIP RESEARCH



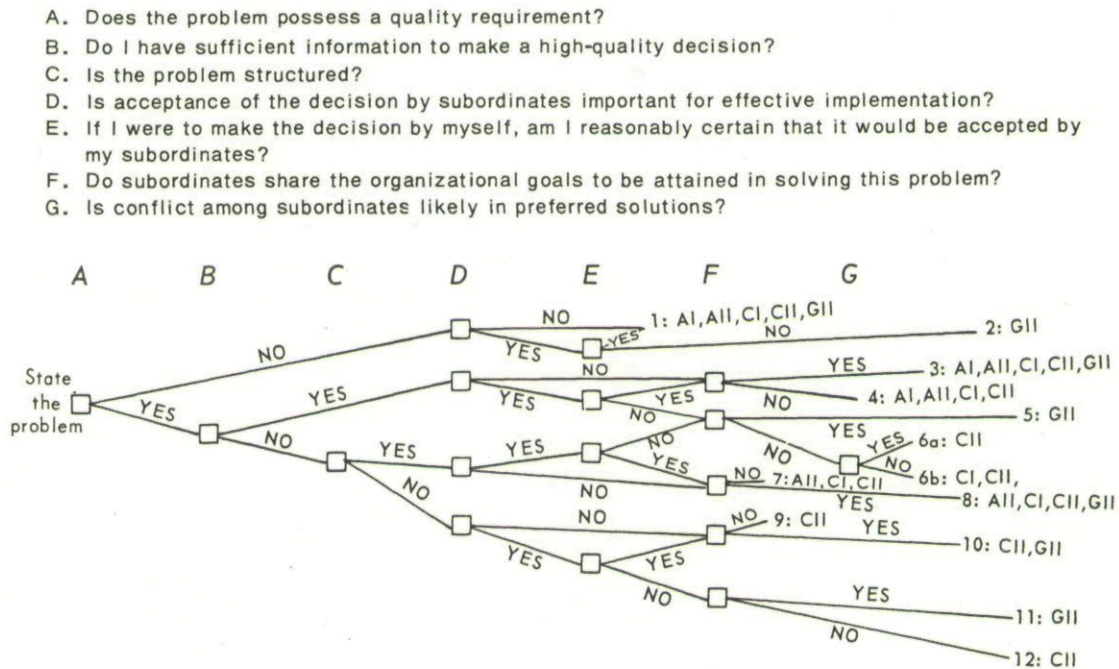
sions that affect all or a substantial portion of the manager's subordinates. At the top of the figure are problem attributes—that is, situational variables that ought to influence the decision process used by the leader—specifically, the amount of opportunity that the leader gives his subordinates to participate in the making of a decision. To use the model, one first selects an organization problem to be solved or decision to be made. Starting at the left-hand side of the diagram, one asks oneself the question pertaining to each attribute that is encountered, follows the path developed, and finally determines the problem type (numbered 1 through 12). This problem type specifies one or more decision processes that are deemed appropriate to that problem. These decision processes are called the “feasible set” and represent the methods that remain

after a set of seven rules has been applied. The first three of these rules eliminate methods that threaten the quality of the decisions, while the last four rules eliminate methods that are likely to jeopardize acceptance of the decision by subordinates.

For those who are unfamiliar with the Vroom-Yetton model, let me point out that the decision processes are described here in a kind of code. AI and AII are variants of an autocratic process. In AI the manager solves the problem by himself using whatever information is available to him at that time; in AII he obtains any necessary information of a specific nature from his subordinates before making the decision himself. CI and CII are variants of a consultative process. In CI he shares the problem with relevant subordinates individually, getting their ideas and

Figure 2

DECISION PROCESS FLOWCHART (FEASIBLE SET)



suggestions before making the decision; CII is similar, but the consultation takes place within the context of a group meeting. Finally, GII corresponds with Norman Maier's concept of group decision in which the manager's role is that of chairperson of a group meeting aimed at reaching consensus on the action to be taken.

The part of the model described so far specifies how decisions should *not* be made, not how they should be made. For most problem types, there exist more than one decision process consistent with the rules and therefore contained in the feasible set. We have also been concerned with the consequences of various ways of choosing from

these alternatives. There is considerable evidence that the time required to make the decision (defined either as the elapsed time or the number of man-hours needed to make the decision) increases with the intensity of involvement or participation of subordinates. Thus a time-efficient model (which we term Model A) would select the most autocratic alternative within the feasible set, a choice that would be clearly indicated in crisis or emergency situations and in situations in which one seeks to minimize the number of man-hours that enter into making the decision.

Of course, time is not the only dimension to include in deciding the degree to

which the leader should encourage the participation of his subordinates in decision making. In addition to the possibilities that participation may increase decision quality or its acceptance (considerations that are incorporated into the rules referred to previously), there are also grounds for believing that participation contributes to individual and team development and is likely to result in more informed and responsible behavior by subordinates in the future. Hence Model B, which could be thought of as a time-investment or developmental model, dictates the choice of the most participative process within the feasible set. It is important to note that Models A and B are consistent with the same rules (to protect decision quality and acceptance) but represent extremely different ways of operating within these rules. Model A maximizes a short-run value—time; Model B maximizes a long-run value—development.

What is the image of the effective leader portrayed by this normative model? He is neither universally autocratic nor universally participative but utilizes either approach in response to the demands of a situation *as he perceives them*. Above all, he is a flexible leader who has thought through his values and who has a repertoire of skills necessary to execute effectively each of the decision processes.

VALIDATING THE MODEL

When Philip Yetton and I wrote our book, we had no evidence validating the model other than the consistency of our rules with existing empirical evidence concerning the consequences of alternative approaches. During the past six months, Art Jago and I have been working to remedy this deficiency. We have asked managers, all of whom were unfamiliar with the model, to select two deci-

sions that they had made—one that proved to be successful and one that proved to be unsuccessful. Each manager wrote up each decision situation as a case and specified the decision process he used in solving the problem. Later these managers were trained in the problem attributes and went back over each of these two cases, coding each in a manner that would permit the researcher to determine the problem type and the feasible set of methods for that problem type.

The data for this study are still coming in. To date, we have written accounts of 46 successful decisions and 42 unsuccessful ones. (It seems that some managers have difficulty in recalling the decisions they made that did not turn out too well!) Figure 3 shows the results available so far. These results clearly support the validity of the model. If the manager's method of dealing with the case corresponded with the model, the probability of the decision's being deemed successful was 65 percent; if the method disagreed with the model, the probability of it's being deemed successful was only 29 percent.

It is important to note, however, that behavior that corresponds with the model is no guarantee that the decision will ultimately turn out to be successful—nor is behavior outside the feasible set inevitably associated with an unsuccessful decision.

To create a model of decision processes that completely predicts decision outcomes (that is, which generates 100 percent observations in upper left and lower right cells) is an impossibility. Any fantasies that we may have entertained about having created a model of process that would completely determine decision outcomes have been permanently dashed against the rocks of reality! Insofar as organizations are open systems and decisions within them are made under conditions of risk and uncertainty, it will be impossible to generate complete predictability for a model

Figure 3

RELATIONSHIP BETWEEN MODEL AGREEMENT
AND DECISION OUTCOME

	Percent Suc- cessful	Percent Unsuc- cessful	Total
Method used agrees with feasible set	65	35	100%
Method used disagrees with feasible set	29	71	100%

such as ours. To be sure, we may be able to use the data from the study I have described to improve the "batting average" of the model, but the limit of success must be less than perfection.

IMPLICATIONS FOR TRAINING

I would now like to turn to the central issue of this symposium, the use of the model in leadership training. Over the past few years, several thousand managers have received training in the concepts underlying the model. The workshops have ranged from two to over five days in length, and the participants have included admirals, corporation presidents, school superintendents, and senior government officials. I have been personally involved in enough of this training to have learned some important things about what to do and what not to do. And because I believe that there are substantial but understandable misconceptions about how training based on the Vroom and Yetton model works, I would like to describe the things I have learned.

It would have been possible to build a training program around the model that was completely cognitive and mechanistic. Participants would be sold on the model and then

trained in its use through intensive practice—first on standardized cases and later on real problems drawn from their own experiences. Such an approach would represent a new domain for Taylorism and could even be accomplished through Skinnerian programmed learning. I believe that, at best, this behavioral approach would influence what Argyris calls espoused theories and would not have any long-lasting behavioral effects.

Our methods have been much more influenced by Carl Rogers than by B. F. Skinner. We have assumed that behavioral changes require a process of self-discovery and insight by each individual manager.

One method of stimulating this process is to provide the participant with a picture of his own leadership style. This picture includes a comparison of his style with that of others, the situational factors that influence his willingness to share his power with others, and similarities and differences between his own "model" and the normative models.

In advance of the training program, each participant sits down with a set of cases, each of which depicts a leader confronted with an actual organizational problem. We call these cases "problem sets," and the number of cases in different problem sets ranges from 30 to 54. The common feature in each of the eight or nine problem sets that have been developed is that the cases vary along each of the situational dimensions used in the construction of the normative model. The set is designed so that the variation is systematic and that the effects of each situational attribute on a given manager's choice of decision process can be readily determined. This feature permits the assessment of each of the problem attributes in the decision processes used by a given manager.

The manager's task is to select the decision process that comes closest to depicting what he would do in each situation. His re-



Victor H. Vroom is John G. Searle Professor of Administrative Sciences and professor of psychology at Yale University. Since 1974, he has been involved in plans for Yale's new School of Organization and Management and has served as chairman of the interim board of governors of that school. He received his bachelor's and master's degrees from McGill University and his Ph.D. degree from The University of Michigan. He was the winner of the Ford Foundation Doctoral Dissertation Competition at Michigan and held the Ford Foundation's Faculty Fellowship at the University of Pennsylvania. He has also won the McKinsey Foundation Research Design Competition (1967), been appointed Fulbright Lecturer in the United Kingdom, and received the James McKeen Cattell Award of the American Psychological Association (1970).

Dr. Vroom is a director of the Connecticut Savings Bank and of the Connecticut Mental Health Center. He has been active as a consultant to over 30 major corporations, including General Electric, Bell Telephone Laboratories, and Chemical Bank. He is a fellow of the American Psychological Association and has served on its council of representatives.

For the past 20 years, Dr. Vroom has been involved in research and teaching on the psychological analysis of behavior in organizations. His book *Work and Motivation* is regarded as a landmark in the field. He has also authored six other books, most recently *Leadership and Decision Making* with Philip Yetton.

sponses are recorded on a standardized form and processed by computer along with other participants' responses in the same program.

Instead of writing about information contained on a printout, I thought that it might be more efficient to let you see what it looks like. The next figure reproduces three of the seven pages of feedback that a manager recently received. Examine the first page of the printout shown in Figure 4. Consider A first in that figure. The first row opposite "your frequency" shows the proportion of cases in which the manager indicated he would use each of the five decision processes. The next row (opposite "peer frequency") shows the average use of these processes by the 41 managers constituting his training group. A comparison of these two rows indicates the methods he used more and less frequently than average.

The third row shows the distribution of decision processes that would be used by a manager using Model A, the time-efficient model in the 30 cases. The final row shows a distribution for Model B, the developmental or time-investment model.

To obtain an overall picture of how participative this manager's responses are in relation to other members of his training group and to Models A and B, it is necessary to assign scale values to each of the five decision processes. The actual numbers used for this purpose are based on research on the relative amounts of participation perceived to result from each process. AI is given a value of 0; AII a value of 1; CI a value of 5; CII a value of 8; and GII a value of 10.

With the aid of these scale values a mean score can be computed for the manager, his peers, and both models. These are obtained by multiplying the percentage of times each process is used by its scale value and dividing by 100. These mean scores are shown in B along with the standard deviation (SD), a

Figure 4. Page 1 of Printout

LEADERSHIP STYLE ANALYSIS

NAME OR I.D.-- JOHN DOE

A -- PROPORTION OF CASES IN WHICH
EACH DECISION PROCESS IS USED

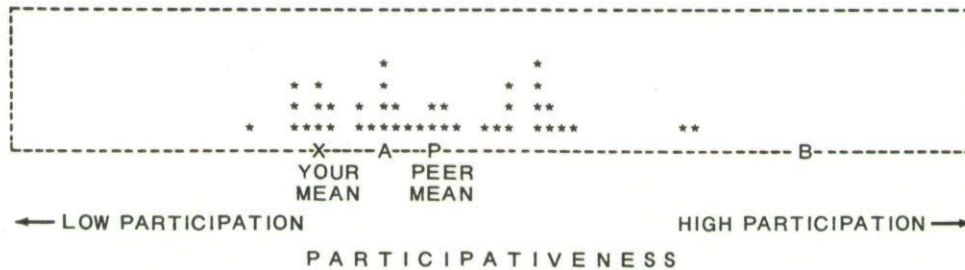
	AI	AII	CI	CII	GII
YOUR FREQUENCY	43%	3%	23%	30%	0%
PEER FREQUENCY	25%	14%	19%	27%	15%
MODEL A (MINIMIZE PARTICIPATION)	40%	13%	3%	23%	20%
MODEL B (MAXIMIZE PARTICIPATION)	0%	0%	0%	40%	60%

B -- SCALED PARTICIPATION SCORES

	MEAN	SD
YOUR RESPONSES	3.60*	3.48
PEER AVERAGE	4.73	3.66
MODEL A	4.17	4.31
MODEL B	9.20	0.98

* - YOUR SCORE IN FIGURE 1

C -- FREQUENCY DISTRIBUTION OF SCALE SCORES
(MEAN LEVELS OF PARTICIPATION)



measure of dispersion around the mean—that is, an indicator of how much behavior is varied over situations.

These mean scores are shown graphically in the figure at the bottom. Each asterisk is the mean score of one of the group members. The symbol X is printed underneath this manager's mean score, the symbol P under the group average, and the symbols A and B show the location on the scale of Models A and B respectively.

D through F in Figure 4 are on the second page of the printout. As we previously mentioned, the normative model identifies 12 problem types corresponding to the terminal nodes of the decision tree shown in Figure 2. There is at least one case within the set of 30 problems that has been designated by the authors and most managers as representative of each type. The problem types and

corresponding problem numbers are shown in the two left-hand columns of D. In the third and fourth columns, the prescriptions of Models A and B are given, and the fifth column shows the feasible set for that problem type. The last column, marked "your behavior," indicates the manager's responses to each of the cases of the indicated problem type. If there is more than one case of that type, the methods used are shown in the same order as the problem numbers at the left-hand side.

E reports the frequency with which the manager's behavior agreed with the feasible set, with Model A, and with Model B. For comparison purposes, the average rates of agreement for members of the manager's training group are also presented.

Each time our manager chose a decision process that was outside the feasible set, he violated at least one of the seven rules un-

Figure 4. Page 2 of Printout

LEADERSHIP STYLE ANALYSIS

D ---- BEHAVIOR BY PROBLEM TYPE					E ---- FREQUENCY OF AGREEMENT WITH THE NORMATIVE MODEL			
PROBLEM TYPE	PROBLEM NUMBERS	MODEL "A" "B"	FEASIBLE SET	YOUR BEHAVIOR	YOUR MEAN	PEER AVERAGE		
1	14,15,17,28	AI	AI,AII,CI,CII,GII	AI	17 (57%)	20.8 (69%)		
2	3,5	GII	GII	AI				
3	2,22,27,30	AI	AI,AII,CI,CII,GII	AI				
4	12,25,26,29	AI	AI,AII,CI,CII	AI				
5	7,8,20	GII	GII	CII				
6A	1,10	CII	CII	CI	12 (40%)	12.1 (40%)		
6B	11	CI	CI,CII	CII				
7	21,24	AI	AI,CI,CII	AI				
8	19,23	AI	AI,CI,CII,GII	AI				
9	4,16	CII	CII	CII				
10	6,9	CII	CII,GII	AI	4 (13%)	6.3 (21%)		
11	13	GII	GII	CII				
12	18	CII	CII	CII				

F ---- FREQUENCY OF RULE VIOLATIONS								
	RULE	RESPONSES IN VIOLATION	YOUR FREQUENCY	PEER AVERAGE	PROBLEM NUMBERS			
1	LEADER INFORMATION RULE	AI	3.0 (25%)*	0.7 (6%)	6	19	24	
2	GOAL CONGRUENCE RULE	GII	0.0 (0%)	1.3 (10%)	0			
3	UNSTRUCTURED PROBLEM RULE	AI,AII,CI	3.0 (50%)	2.8 (47%)	6	9	16	
4	ACCEPTANCE RULE	AI,AII	1.0 (10%)	1.3 (13%)	5			
5	CONFLICT RULE	AI,AII,CI	3.0 (60%)	1.9 (39%)	1	5	10	
6	FAIRNESS RULE	AI,AII,CI,CII	2.0 (100%)	1.3 (63%)	3	5		
7	ACCEPTANCE PRIORITY RULE	AI,AII,CI,CII	4.0 (100%)	2.9 (72%)	7	8	13	20

* --- PROBABILITY OF RULE VIOLATION (THAT IS, FREQUENCY OF VIOLATION EXPRESSED AS A PERCENTAGE OF RULE APPLICABILITY)

derlying the model. F in Figure 4 reports the frequencies with which each rule was violated both by this manager and by his peer group. The right-hand column shows the specific cases in which the rule violations occurred. It should be noted that each manager understands the seven rules by the time he receives the feedback, and it is possible for him to re-examine the problems with the appropriate rule in mind.

We have previously noted that the cases included in a problem set are selected in accordance with a multifactorial experimental design. Each of the problem attributes is varied in a manner that will permit the manager to examine its role in his leadership style. Figure 4 (page 3 of printout) depicts these results. Consider problem attribute A—the importance of the quality of the final solution. The problem set contains cases that have a high quality requirement and those without a quality requirement (the identifying numbers of these cases are shown at the right-hand side of this table).

The mean scores for the manager's behavior on these two sets of cases are specified at the left-hand side of each row and are designated by the symbol X. They are also designated by the symbol X on each of the scales, and the slope of the line made by connecting the two letters (X) provides a visual representation of that difference.

If the score opposite "high" is greater (that is, more toward the right-hand side of the scale), it means that the manager encourages more participation from his subordinates on important decisions than on so-called "trivial" ones. However, if the score opposite "high" is lower, it means that the manager is willing to use more participative methods on problems for which the course of action adopted makes little difference and is more autocratic on "important" decisions.

The letter P shown on both scales

designates the average effects of this attribute on the manager's peer group, and the letters A and B designate the effects on Models A and B respectively.

A similar logic can be used in interpreting the effects of each of the other attributes in the model. At the bottom of the page, the computer prints out the three attributes that have the greatest effect on the manager's behavior—magnitude of effect referring to the amount of difference the attribute makes in his willingness to share his decision-making power with subordinates.

The results shown in Figure 4 pertain to only one manager and to his peer group. Similar data have been obtained from several thousand managers, a sufficient number to provide the basis for some tentative generalizations about leadership patterns. One of our conclusions is that differences among managers in what might be termed a general trait of participativeness or authoritarianism are small in comparison with differences within managers. On the standardized cases in the problem sets, no manager has indicated that he would use the same decision process on all problems or decisions—and most use all methods under some circumstances.

It is clear that no one score computed for a manager and displayed on his printout adequately represents his leadership style. To begin to understand his style, the entire printout must be considered. For example, two managers may appear to be equally participative or autocratic on the surface, but a close look at the third page of the printout (Figure 4) may reveal crucial differences. One manager may limit participation by his subordinates to decisions where the quality element is unimportant, such as the time and place of the company picnic, while the other manager may limit participation by his subordinates to those decisions with a demonstrable impact on important organizational goals.

In about two-thirds of the cases we have examined—both those used in the problem sets and those reported to us by managers from their experiences—the manager's behavior was consistent with the feasible set of methods given by the model. Rules that helped ensure the acceptance of or commitment to a decision tend to be violated much more frequently than rules that protect the quality of the decision. Our findings suggest strongly that decisions made by typical managers are more likely to prove ineffective because subordinates don't fully accept decisions than because decision quality is deficient.

Let me now turn to another thing that we have learned in the design of this training—the usefulness of the small, informal group as a vehicle in the change process. The first four or five hours in the training process are spent in creating six- to eight-person teams operating under conditions of openness and trust. Each participant spends more than 50 percent of the training time with his small group before receiving feedback. Group activities include discussing cases in the problem set and trying to reach agreement on their mode of resolution, practicing participative leadership styles within their own groups, analyzing videotapes of group problem-solving activities; then group members give one another feedback on the basis of predictions of one another's leadership styles.

After feedback, group members compare results with one another and with their prior predictions and share with one another what they have learned as well as their plans to change. The use of small, autonomous groups greatly decreases the dependence of participants on the instructor for their learning and increases the number of people who can undergo the training at the same time. I have personally worked with as many as 140 managers at the same time (22 groups), and 40 to 50 is commonplace.

One criticism that has been correctly leveled at the Vroom and Yetton work stems from the fact that the data on which the feedback is based are, at best, reports of intended actions rather than observations of actual behavior. While we have evidence that most managers honestly try to portray what they think they would do in a particular situation rather than what they think they should do, I am persuaded by Argyris's evidence that many people are unaware of discrepancies between their espoused theories and their actions. Small groups can be helpful in pointing out these discrepancies. I have seen managers who were universally predicted by other group members to have a highly autocratic style, who were provided with very specific evidence of the ground for this assumption by other group members, but who later received a printout reflecting a much more participative style. I am less concerned about the relative validity of these discrepant pieces of data than I am about the fact that they are frequently confronted and discussed in the course of the training experience.

In fact, we have begun using a different source of potential inconsistencies, and it is logical to assume that this source will have more information about a manager's behavior than do the other members of his small group. I am referring to the manager's subordinates.

In a recent variant of the training program, subordinates were asked to predict their managers' behavior on each of the cases in the problem set. These predictions were made individually and processed by computer, which generated for each manager a detailed comparison of his perceptions of his leadership style with the mean perception of his subordinates. Not surprisingly, these two sources of information are not always in perfect agreement. Most managers, as seen by their subordinates, are substantially more autocratic

Figure 4. Page 3 of Printout

LEADERSHIP STYLE ANALYSIS

G --- MAIN EFFECTS OF PROBLEM ATTRIBUTES		PARTICIPATIVENESS ON PROBLEMS WITH ATTRIBUTE		YOUR MEAN = X PEER MEAN = P		MODEL A MEAN = A MODEL B MEAN = B	
PROBLEM ATTRIBUTES	< LOW PARTICIPATION	HIGH PARTICIPATION	>	PROBLEMS WITH ATTRIBUTE			
IMPORTANCE OF THE QUALITY OF THE FINAL SOLUTION (ATTRIBUTE A)	HIGH X=4.17 P=4.97 A=4.38	-----X-A-----P-----	-----B-----	(1,2,4,6,7,8,9,10,11,12,13,16,18,19,20,21,22,23,24,25,26,27,29,30)			
ADEQUACY OF MANAGER'S INFORMATION AND EXPERTISE (ATTRIBUTE B)	LOW X=1.33 P=3.75 A=3.33	-----X-----A-----P-----	-----B-----	(3,5,14,15,17,28)			
DEGREE OF STRUCTURE IN PROBLEM (ATTRIBUTE C)	HIGH X=3.67 P=4.24 A=2.75	-----A-----X-----P-----	-----B-----	(1,2,8,11,12,20,22,25,26,27,29,30)			
IMPORTANCE OF SUBORDINATE ACCEPTANCE (ATTRIBUTE D)	LOW X=5.67 P=6.46 A=8.33	-----X-----P-----	-----A-----B-----	(4,6,9,13,16,18)			
PROBABILITY OF LEADER'S SELLING HIS OWN SOLUTION (ATTRIBUTE E)	HIGH X=3.80 P=5.30 A=5.35	-----X-----P-----	-----B-----	(1,3,5,6,7,8,10,11,12,13,14,15,16,18,19,20,22,24,29,30)			
DEGREE TO WHICH SUBORDINATES SHARE GOALS (ATTRIBUTE F)	LOW X=3.20 P=3.59 A=1.80	-----A-----X-----P-----	-----B-----	(2,4,9,17,21,23,25,26,27,28)			
PROBABILITY OF CONFLICT AMONG SUBORDINATES (ATTRIBUTE G)	HIGH X=6.30 P=6.91 A=8.90	-----X-----A-----	-----A-B-----	(6,12,14,15,16,19,22,24,29,30)			
	LOW X=3.58 P=5.45 A=4.83	-----X-----A-----P-----	-----B-----	(1,3,5,7,8,10,11,13,18,20)			
	LOW X=4.75 P=4.49 A=3.92	-----A-----P-----X-----	-----B-----	(2,6,7,8,9,13,19,20,22,23,27,30)			
	HIGH X=3.27 P=3.99 A=4.27	-----X-----P-----A-----	-----B-----	(1,4,10,11,12,16,18,21,24,25,26,29)			
	LOW X=3.93 P=5.47 A=4.07	-----X-----P-----	-----B-----	(1,2,5,8,9,10,13,15,16,19,21,22,26,28,29)			
				(3,4,6,7,11,12,14,17,18,20,23,24,25,27,30)			

***** NOTE: THE THREE ATTRIBUTES WITH THE GREATEST EFFECT ON YOUR RESPONSES ARE A, C, AND E. *****

(about one point on the 10-point scale) and in substantially less agreement with the model. Once again, I am less concerned with which is the correct description of the leader's behavior than I am with the fact that discrepancies generate a dialogue between the manager and his subordinates that can be the source of mutual learning.

We are still experimenting with methods of using the Vroom-Yetton model in leadership training and, I believe, still learning from the results of this experimentation. How effective is the training in its present form? Does it produce long-lasting behavioral changes? I must confess that I do not know. Art Jago and I are in the first stages of designing an extensive follow-up study of almost 200 managers in 20 different countries who have been through a four- or five-day version of the training within the past two and one-half years. If we can solve the incredible logistical and methodological problems in a study of this kind, we should have results within a year.

On the basis of the evidence, I am optimistic on two counts: first, as to the leader's potential to vary his style to meet the requirements of a situation; second, as to the leader's ability, through training and development, to enlarge the repertoire of his styles. In short, like Argyris and unlike Fiedler, I believe that managers can learn to become more effective leaders. But like Fiedler (and unlike Argyris), I believe that such effectiveness requires a matching of one's leadership style to the demands of the situation. I also am confident that 50 years from now both contingency models will be found wanting in detail if not in substance. If we are remembered at that time, it will be for the kinds

of questions we posed rather than the specific answers we provided.



SELECTED BIBLIOGRAPHY

Victor Vroom and Philip Yetton's *Leadership and Decision Making* (University of Pittsburgh Press, 1973) presents a comprehensive description of their normative model, its research underpinnings, and its use in leadership training. Vroom's "A New Look at Managerial Decision Making" (*Organizational Dynamics*, Spring 1973) gives a brief description of the model and a summary of early research results. Victor Vroom and Arthur Jago's "Decision Making as a Social Process: Normative and Descriptive Models of Leader Behavior" (*Decision Sciences*, Vol. 5, 1974) extends the model to individual problems (affecting only a single subordinate) and incorporates delegation as a process. It compares and contrasts behavior on group and individual problems.

Norman Maier's *Problem Solving Discussions and Conferences* (McGraw-Hill, 1963) contains the most useful account of the conference leadership skills necessary to execute a participative approach to decision making.

Robert Tannenbaum and Warren Schmidt's "How to Choose a Leadership Pattern" (*Harvard Business Review*, March-April 1958) presents another perspective on the normative issues surrounding participation in decision making.

Any reader interested in further exploring the approach to leadership training described in this article should write to Kepner-Tregoe, Inc.; P.O. Box 704; Research Road; Princeton, New Jersey 08540.

Copyright of Organizational Dynamics is the property of Elsevier Science Publishing Company, Inc.. The copyright in an individual article may be maintained by the author in certain cases. Content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.