Yale School of Organization and Management

(12)

A NORMATIVE MODEL OF WORK TEAM EFFECTIVENESS

J. Richard Hackman

Technical Report #2
Research Program on Group Effectiveness
Yale School of Organization and Management
November, 1983

12

A NORMATIVE MODEL OF WORK TEAM EFFECTIVENESS

J. Richard Hackman

Technical Report #2
Research Program on Group Effectiveness
Yale School of Organization and Management
November, 1983

Abstract

Descriptive research on group performance has produced neither a set of empirical generalizations sturdy enough to guide the design and management of work teams, nor interventions that reliably improve team effectiveness. As an alternative, a normative model of group effectiveness is proposed and discussed. The model identifies potentially manipulable aspects of the group and its context that are particularly potent in promoting team effectiveness, and organizes those factors to make them useful in diagnosing the strengths and weaknesses of task-performing teams. The final section of the paper explores the implications of the normative model, and outlines the beginnings of an action model for creating and maintaining effective work groups in organizations.

This report is based on research supported by the Organizational Effectiveness Research Program, Psychological Sciences Division, Office of Naval Research, under Contract N00014-80-C-0555, NR 170-912. Approved for public release; distribution unlimited. Reproduction in whole or in part is permitted for any purpose of the U.S. Government.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A136398	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) A Normative Model of Work Team Effectiveness	5. TYPE OF REPORT & PERIOD COVERED Interim
	6. PERFORMING ORG. REPORT NUMBER T. R. #2
7. AUTHOR(s) J. Richard Hackman	8. CONTRACT OR GRANT NUMBER(s) N00014-80-C-0555
9. PERFORMING ORGANIZATION NAME AND ADDRESS School of Organization and Management Yale University New Haven, CT 06520	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-912
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Group Office of Naval Research (Code 442) Arlington, VA 22217	12. REPORT DATE November, 1983
	13. NUMBER OF PAGES 70
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	15. SECURITY CLASS. (of this report) Unclassified
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited. Reproduction in whole or in part for any purpose of the U.S. Government is permitted.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Group, Team, Performance, Effectiveness, Theory, Task, Composition, Context, Group Process, Group Interaction, Criteria

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

A normative model of group effectiveness is proposed and discussed. It identifies potentially manipulable aspects of the group and its context that are particularly potent in promoting team effectiveness, and organizes those factors to make them useful in diagnosing the strengths and weaknesses of task-performing teams. The implications of the model are explored, and the beginnings of an action model for creating and maintaining effective work teams in organizations are proposed.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

S/N 0102-LF-014-6601

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

A NORMATIVE MODEL OF WORK TEAM EFFECTIVENESS

J. Richard Hackman
Yale University
November 1983

Chapter Outline

A NORMATIVE MODEL OF WORK TEAM EFFECTIVENESS[1]

J. Richard Hackman
Yale University

In an essay written to commemorate the fiftieth anniversary of the well-known Hawthorne studies at Western Electric Corporation, Harold Leavitt (1975) observed:

> Far and away the most powerful and beloved tool of applied behavioral scientists is the small face-to-face group. Since the Western Electric researches, behavioral scientists have been learning to understand, exploit and love groups. Groups attracted interest initially as devices for improving the implementation of decisions and to increase human commitment and motivation. They are now loved because they are also creative and innovative, they often make better quality decisions than individuals, and because they make organizational life more livable for people. One can't hire an applied behavioral scientist into an organization who within ten minutes will not want to call a group meeting and talk things over... (p. 76)

Leavitt's paper, entitled "Suppose We Took Groups Seriously...," raises the possibility that both people and organizations would be better off if groups, rather than individuals, were the basic building blocks in the design and management of organizations. Recent trends in organizational practice--such as the increasing use of quality circles, autonomous work groups, project teams, and management task forces--suggest that groups are indeed becoming a popular way to get things done in organizations.

---

[1] This chapter will appear in the Handbook of organizational behavior, edited by Jay Lorsch (Prentice-Hall, forthcoming) under the title "The Design of Work Teams." It was prepared as part of a research project on group performance supported by the Office of Naval Research (Organizational Effectiveness Research Program, Contract No. 00014-80-C-0555 to Yale University). The helpful comments and suggestions of Clay Alderfer, Susan Cohen, Russ Eisenstat, Connie Gersick, Judith Hackman, and Bill Kahn are gratefully acknowledged.

While groups can yield the kinds of benefits Leavitt discusses, they also have a shady side, at least as they typically are designed and managed in contemporary organizations. They can, for example, waste the time and energy of members, rather than use them well. They can enforce norms of low rather than high productivity (Whyte, 1955). They sometimes make notoriously bad decisions (Janis, 1982). Patterns of destructive conflict can arise, both within and between groups (Alderfer, 1977). And groups can exploit, stress, and frustrate their members--sometimes all at the same time (Hackman, 1976).

Clearly, if Leavitt's vision is to be realized, we must expand what we know about how to design, manage, and consult to work groups in organizations. There is currently no well-tested and accepted body of research and theory to guide practitioners in using groups to do work, nor do we have a documented record of success in using behavioral science techniques to help groups become more effective.

This chapter assesses what we do know about the design and management of work groups, provides a conceptual model for integrating and extending that knowledge, and offers some action guidelines for structuring, supporting, and managing groups in contemporary organizations.

OVERVIEW

The chapter is organized in three major sections. We begin by assessing the findings from descriptive research on group behavior. Research in this tradition seeks to generate knowledge about what actually happens in groups and to develop generalizations about the associations among various features of the group and its context. To explore the implications of descriptive research for work group effectiveness, we use an input-process-output

framework. This framework posits that various input factors (such as features of the group, its task, and its work context) affect group interaction process (i.e., the interpersonal transactions that take place among members) which in turn affects the output of the group. Ideally, one should be able to discover how group interaction mediates between the way a group is set up and the results of its work--including its performance effectiveness. It turns out, however, that research in the descriptive tradition has produced neither a set of empirical generalizations sturdy enough to guide managerial practice nor interventions that reliably improve group performance.

As an alternative, we next present and discuss a normative model of group effectiveness. This model departs from the descriptive approach in two ways. First, the focus is on a single (albeit multidimensional) outcome: work group effectiveness. Second, the model identifies potentially manipulable aspects of the group (and of its work context) that are particularly potent in promoting team effectiveness, thereby providing a basis for diagnosing the strengths and weaknesses of groups as performing units. While based in part on findings from descriptive research, the normative model is essentially a theoretical statement in which existing knowledge is reconfigured to make it more useful in improving work team effectiveness.

The final section of the chapter draws out the implications of the normative model, and suggests the beginnings of an action model of group effectiveness. The focus here is on what one would actually do to create and maintain an effective work team. Beyond its use as a guide for designing, managing, and consulting to work teams, the action model also provides a means for testing and revising the normative model on which it is based (i.e., by determining the degree to which changes suggested by the normative model result in improvements in performance).

DESCRIPTIVE RESEARCH ON GROUP BEHAVIOR AND EFFECTIVENESS

There have been literally thousands of research studies of group behavior and performance. The great majority of them describe what takes place in various kinds of groups or map the empirical associations among variables that characterize a group, its performance context, and its products. These studies aim to develop and test generalizations that chart what happens in groups reliably, validly, and relatively comprehensively.[2]

A general framework for organizing and systematizing this work has been developed by McGrath (e.g., 1964) and is depicted in Figure 1. The framework **classifies both input and output variables into three sets: those that** describe individual group members, those that describe the group as a whole, and those that describe the environment in which the group operates. In principle, all relevant variables can be assessed at any two points in time (identified in the figure as t_1 and t_2), making it possible to trace changes in the state of the system over a specified time period.

A key assumption of the framework is that input states affect group outputs via the interaction that takes place among members. If, for example, a highly cohesive group (input at t_1) were to perform better on some task (output at t_2) than a group low in cohesiveness, it should be possible to explain the performance difference by comparing the interaction processes of the two groups. Perhaps members of the cohesive group talked more about their work, and encouraged each other to work hard and quickly. Or perhaps they

---

[2] For an early (but still useful) review and integration of literature on small group behavior, see McGrath and Altman (1966). Current reviews are provided by Hare (1976), McGrath and Kravitz (1982), Davis and Hinsz (1982), and McGrath (1983). In addition, a book edited by Payne and Cooper (1981) provides substantive analyses of a number of different types of groups commonly used in organizations (e.g., policy-making groups, project groups, negotiating teams, and so on).

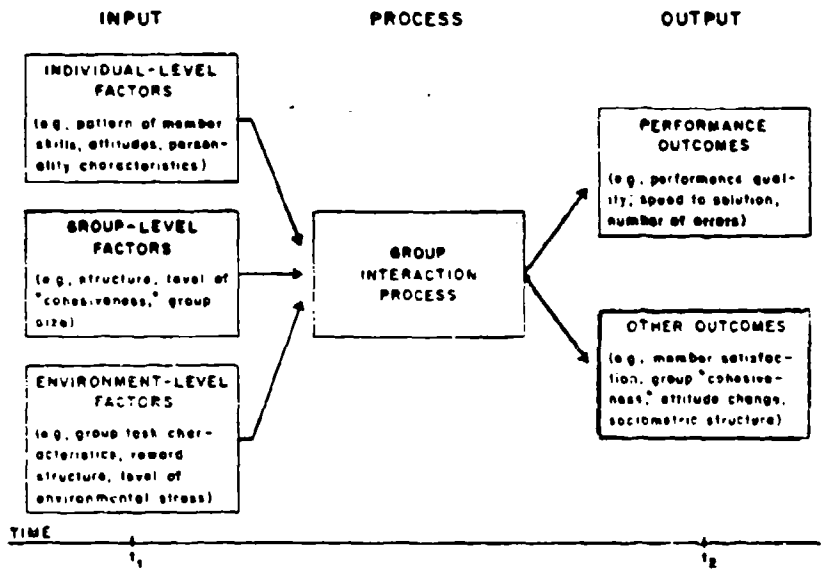


Figure 1. An input-process-output framework for analyzing group behavior and performance. (Adapted from McGrath, 1964)

simply spent more time together, and used part of that time for extra work on the task. Whatever the explanation for this (hypothetical) finding, it should be discernible in the group interaction.[3]

Most research and theory in the descriptive tradition shares McGrath's assumption that process mediates input-output relationships. This is not surprising: group interaction is readily apparent in all groups, it is interesting, we know some things about how to study it--and besides, something has to mediate between input and output states. Yet, as will be seen below, the input-process-output paradigm may have misdirected the search for useful knowledge about group effectiveness. Contrary to what one would hope, the key is not always under the lamppost where the light is brightest.

Research on Group Behavior

Descriptive frameworks such as the one illustrated in Figure 1 are helpful in organizing, summarizing, and integrating empirical research on group behavior. And a review of the links and categories in this framework reveals that we have learned quite a bit about group behavior over the last few decades. For example, we now have a reasonably good understanding of the patterns of group process that are typical of various kinds of groups. And several useful descriptive models of the group development process have been based on these findings.[4] The input-process link in the framework also has

---

[3] It is, of course, necessary to select an appropriate time interval and to focus on the most important aspects of interaction process if this kind of analysis is to be successful. These decisions often are far from straightforward.

[4] Research describing group interaction and charting it over time stemmed primarily from the Bales (1950) method for coding group interaction. For a description of the current, multiple-level version of the Bales observational methodology, see Bales and Cohen (1979); other methods for describing group process are reviewed by Hare (1982, Ch. 1-4). Group development models are reviewed by Hare (1976, Ch. 4) and Tuckman (1965).

received a good deal of research attention, with special emphasis on the effects of group composition variables (i.e., group size and the attributes of group members).[5] Research on process-outcome relationships has emphasized the impact of group interaction on the attitudes, beliefs, and behaviors of individual group members, and the ways that interaction shapes the outcomes of group decision-making and problem solving.[6]

A great deal of research has been done on input-output relations in small groups. These studies have examined the effects of many different input variables on the subsequent behavior and attitudes of individual members, on changes in the state of the group as a social system, and on group performance outcomes. While input-output studies have not turned out to be as cumulative as group researchers had expected (cf. McGrath & Altman, 1966), some important findings and insights have emerged.[7]

---

[5] For an early but still cogent review of findings on size-process relationships, see Thomas and Fink (1963). For the seminal work on group composition and member compatibility, see Schutz (1958). The relationship between member personality and behavior in groups is explored in detail by Bales (1970).

[6] For an overview of group influences on individuals in organizations, see Hackman (1976). Literature on the way group interaction can result in "choice shifts" (i.e., choosing riskier or more conservative courses of action following group discussion) is reviewed by Myers and Lamm (1976). An overview of research on group decision processes is provided by Nagao, Vollrath and Davis (1978). Janis (1982) provides a historical analysis of the effects of group interaction on policy decisions. Finally, a program of research showing how solutions gain credence and eventual acceptance as a function of what transpires in group discussions is summarized by Hoffman (1979b).

[7] For example, Steiner (1972) has developed an informative set of models showing how the effect of group size on group productivity depends on the kind of task being performed. In the decision-making area, Davis and his colleagues (e.g., Davis, 1973; Stasser & Davis, 1981) have devised and tested sophisticated quantitative models that show how the prediscussion preferences of group members (in interaction with other variables) combine to determine both decision outcomes and members' postdiscussion preferences. McGrath (1983, Ch. 6) reviews input factors that influence group performance on problem-solving and intellective tasks.

Two characteristics of input-output research on group behavior merit special note, as they have potentially important implications for the development of an action-oriented model of group task effectiveness. First, the relationships obtained appear to depend substantially on the properties of the group task being performed. Findings for one type of task often turn out not to hold for groups working on different kinds of tasks.[8] Second, while research reports typically discuss how group interaction process may mediate input-output relationships, they usually do so inferentially--that is, by specifying what members may have done, or logically had to have done, to account for the results. Rarely has the mediating role of group process been assessed empirically. Moreover, few substantive findings have emerged that are useful as guides for creating and maintaining effective work teams (Hackman & Morris, 1975).

How are we to understand these gaps in the group performance literature? Has the high cost of conducting process studies dampened the interest of researchers in examining input-process-performance relationships? Or have the serious methodological problems that pervade this kind of research[9] so compromised its findings that one cannot be sure what has been found? While these possibilities are credible, the problem may run deeper, as will be seen below.

---

[8] For an excellent typology of group tasks, and a summary of what has been learned about group behavior and performance for each of them, see McGrath (1983).

[9] For example: choosing the proper categories for coding interaction, devising appropriate analytic models for making sense of interaction patterns, and dealing with inconsistencies in the behavior of groups across tasks and settings (Hackman & Morris, 1975, pp. 56-61).

Implications for Team Effectiveness

If we had a robust set of generalizations that allowed us to predict, on the basis of prior assessments of input and process variables, how well a group would perform, then we should be able to translate these generalizations into prescriptions for the design and management of work teams. This is exactly what some scholars and practitioners mean by "applied social science": collecting the products of basic research and theory and using them as action guides in the world of practice.

It is an inviting view of the relationship between scholarship and practice, and if I could have written this chapter in accord with that view I would have been tempted to do so.[10] It would have been a relatively straightforward task of summarizing what has been learned in research on group behavior, and then using those summaries to generate guidelines for action.

Unfortunately, the research literature reviewed above suggests that such an undertaking would not be very fruitful. For one thing, existing generalizations about group behavior are neither strong enough nor stable enough to serve as guides for managerial practice. The generalizability of our findings appears to be quite low, and we do not have a good understanding of what is responsible for the seeming instability of our results across tasks and settings (Vidmar & Hackman, 1971).

Moreover, when research has revealed statistically reliable associations between group effectiveness and various input or process variables, those associations have tended to be relatively weak and/or highly dependent on a particular task and situational context. A manager might think twice before making a significant group or organizational change in hopes of realizing a

---

[10] A good attempt to do this for group behavior, and one that acknowledges the limitations of such an approach, is provided by Hoffman (1979a).

barely discernible improvement in team effectiveness.

Finally, some of the variables that have been shown to relate to group performance (e.g., certain aspects of group interaction process or the cultural milieu within which the group operates) are not useful as points of intervention in designing and managing teams. In some cases, change of the variable is impractical (it would take a long time, for example, to modify the overall culture of an organization). In others, the focal variable itself is more a sign than a cause of performance problems. As will be seen below, this is the case for certain aspects of group interaction process.

The bulk of this chapter is devoted to an alternative, explicitly action-oriented approach to analyzing the performance of work groups in organizations. Before proceeding, however, it may be worthwhile to look a little more closely at the reasons why the descriptive-empirical approach has not given rise to an "applied social psychology of group effectiveness." We will give special attention to (a) the variables typically chosen for study in group effectiveness research, and (b) how group interaction process typically is conceived and measured. In these discussions we will find some clues to guide the development of a normative model of team effectiveness.

The Choice of Variables

A great deal of research on small groups has been conducted in the experimental laboratory. It is sometimes argued that laboratory research, because of its inherent artificiality, is not useful in understanding organizational phenomena. That argument is misplaced: when appropriately conceived and executed, laboratory research can generate powerful tests of conceptual propositions--including propositions about organizational phenomena (Weick, 1965). The trick is to be sure that the phenomena of interest are

actually created in the laboratory, and to make the right decisions about what variables to manipulate (or measure), what variables to control, and what variables to ignore (Runkel & McGrath, 1972).

Laboratory studies of groups have tended to focus on personal and interpersonal variables, and to hold constant or ignore contextual variables. Indeed, laboratory researchers learn quickly that one had better control variables such as the group task, experimenter-subject relationships, reward system properties, and the demand characteristics of the setting where the research takes place. Not to do so is to invite these variables to overwhelm the more subtle intra- or inter-personal phenomena one is attempting to study.

The major contextual influence in the laboratory, then, is the **experimenter: it is he or she who decides where the study will be conducted,** recruits the subjects and forms them into groups, selects and assigns the group task, chooses what rewards will be available and administers them, provides groups with the information and resources they need to do their work, and establishes the basic norms of conduct for the research setting. In all, the experimenter serves as a powerful context for the group, and (if expert in his or her role) makes sure that all groups are treated as nearly the same as possible.

Thus, in the interest of good experimental practice, some of the variables that may most powerfully affect what happens in groups are fixed at constant levels, thereby making it impossible to learn about their effects. By contrast, the approach to work group effectiveness presented in this chapter gives special emphasis to the design of groups as performing units, and to their relations with their organizational contexts--an emphasis also seen in many state-of-the-art action projects involving work teams in organizations (e.g., Poza & Markus, 1980).

The Role of Group Process

Developing usable knowledge about group performance may require some changes in how we deal with group interaction process--in research (by no longer sufficing with descriptions of whatever interaction happens to develop naturally in work teams), in intervention (by reconsidering the viability of process as an intervention target), and in theory (by reconceptualizing the role of process in the causal chain that links input and output states). These three possibilities are explored below.

The descriptive emphasis. When social psychologists study group interaction, they typically focus on group processes that develop naturally, without direct process interventions. When competently done, these studies help us understand how groups function in the laboratory or field settings where the data were collected.

But what if the kinds of group processes typically observed were dysfunctional for group task effectiveness? Perhaps most groups operate in ways that minimize the frequency of anxiety-arousing episodes, but in the process avoid difficult task problems. Or perhaps group members generally are not very adept at coordinating their efforts, or at drawing out and using each other's task-relevant knowledge and skill.

If this were the case, descriptive studies would document the dysfunctionality of group interaction, scholars would conclude that group process serves mainly to impair group effectiveness, research attention would focus on understanding the nature and extent of "process losses" in task-oriented groups, and interventionists would try to help groups solve their process problems. And, in fact, this is approximately what has happened in social psychological research on group performance.

Consider, for example, Steiner's (1972) model of group process and productivity, which is probably the most widely accepted way of thinking about process-productivity relationships. Steiner posits that the actual productivity of a group is equal to its theoretical potential productivity (i.e., what would be achieved if all existing resources were optimally used) minus inevitable losses due to group process. No provision is made for any "process gains" that might result from the interaction among group members.

Few social psychological studies have addressed the possibility that groups might perform better if members worked together in ways that differ from typical interaction patterns. Argyris (1969) argues that this is a serious failure of social psychological theory. To develop knowledge useful in creating effective work teams, he suggests, it may be necessary to move beyond descriptive research to a more normative and action-oriented approach--attempting to create and test novel patterns of group interaction, ways members can work together that not only reduce process losses but also foster synergistic process gains.

Usefulness as a point of intervention. Although process interventions are not often employed in social psychological research on group performance, they are quite popular in consultative work with groups--for theoretical reasons certainly (see Cooper, 1975), but also because process difficulties present themselves so vividly. It is easy to see wasted time and effort, dysfunctional conflict among members, and a variety of other process problems when observing a group that is having trouble with its work. And it may be very difficult for an interventionist to pass up the opportunity to provide consultative help with such problems.

A fairly extensive literature has developed on the effects of process interventions as a consultative tool. These studies probe the effects of a wide variety of intervention techniques, including eclectic process consultation, systematic role negotiation, training in group relations skills, and the use of structured procedures that minimize spontaneous group interaction.[11] Research findings on the efficacy of process interventions can be roughly summarized as follows:

1. Interventions that focus directly and primarily on the quality of relationships among members usually succeed in changing member attitudes, sometimes affect behavior in the group, but have no consistent effects on group performance effectiveness (for reviews, see Friedlander & Brown, 1974, Kaplan, 1979, and Woodman & Sherwood, 1980). The same appears to be true for structured techniques aimed at improving group creativity.[12]

2. Interventions that structure group interaction to minimize opportunities for "process losses" do improve team effectiveness for certain kinds of groups and tasks (Green, 1975; Stumpf, Zand & Freedman, 1979). Like the rules of parliamentary procedure, such interventions aim to (a) limit the

---

[11] "Process consultation" is a general term used to describe interventions intended to help group members develop new, more task-effective ways of working together. In its most flexible form, the consultant and the group work together to diagnose the state of the group and to plan changes based on that diagnosis (Schein, 1969). Four more focussed approaches to team development are identified and discussed by Beer (1976): (a) goal-setting and problem-solving consultations, (b) assistance in improving interpersonal relationships among members, (c) role definition and negotiation, and (d) integrated consultative approaches such as the managerial grid (e.g., Blake & Mouton, 1969). Still other process interventions involve the introduction of highly structured procedures for doing the work of the group--such as the Nominal Group Technique (Delbecq, Van de Ven & Gustafson, 1975), and various creativity-enhancing procedures (for a compilation and review of these, see Stein, 1975).

[12] The best-researched of these techniques is brainstorming (Osborn, 1957). For evidence on the efficacy of brainstorming, see Dunnette, Campbell and Jaastad (1963) and the review by Stein (1975).

amount of spontaneous interaction that can occur among members and/or (b) structure the interaction that does take place so as to minimize the opportunity for dysfunctional group processes to develop. Indeed, in the Delphi technique (Dalkey, 1967; Delbecq, Van de Ven & Gustafson, 1975) members communicate only through summaries of their inputs compiled by a coordinator, eliminating the possibility of any spontaneous member-to-member interaction.

In sum, research findings regarding process interventions suggest that structured techniques that minimize process losses (or reduce their effects) can be helpful. On the other hand, interventions that attempt to improve the quality of interpersonal relations among members or to promote synergistic "process gains" appear not to yield reliable improvements in group task effectiveness.

The role of process in the causal chain. The findings about process interventions raise some difficult questions about how group interaction relates to team effectiveness. Why do process interventions seem to help only when they constrain (or highly structure) interaction among members? Why do consultations that help members relate better to one another not result in more reliable or substantial improvements in performance? Why do groups plagued with conflict and dissension sometimes perform better than those with an abundance of warmth and mutual respect among members? What, indeed, is the role of group interaction process in transforming input states into performance outcomes?

One way of dealing with these questions is proposed in the normative model of group effectiveness to be described in the second part of this chapter. As background for that discussion, let us look briefly at two reasons why traditional conceptions of group process may have muddled understanding about its mediating role.

1. A basic premise of the input-process-output model is that input states affect performance outcomes exclusively through their intermediate effects on how members interact with one another. This model is so ingrained in our thinking about group behavior that it is hard to imagine alternatives. Yet there are some alternatives, as illustrated in Parts B and C of Figure 2.

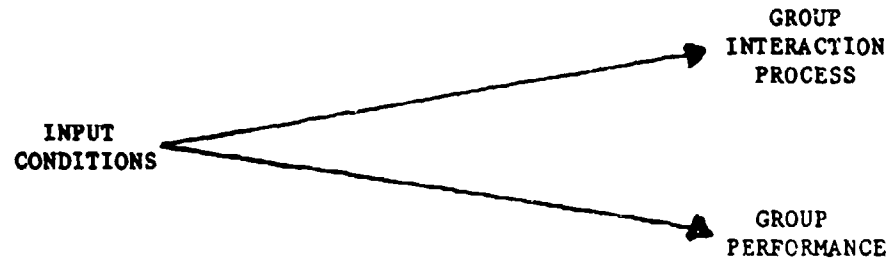
Part A of the figure shows the traditional model. The alternative in Part B suggests that both group process and performance effectiveness are consequences of the way a group is set up and managed. In this view, groups that are well designed and well supported have a better chance of achieving excellence in process and in performance than do groups with poor designs or unsupportive organizational contexts. The quality of group interaction would be correlated with group performance in this model--but would not determine it.

Another alternative is illustrated in Part C of Figure 2. Here again, input conditions affect both group process and performance, but these variables also have reciprocal effects on each other. This model suggests that group interaction does mediate the impact of input conditions--but also that performance outcomes influence group interaction. The latter proposition may seem an impossibility, since performance comes later in time than the interaction it is said to affect. However, the impossibility applies only to short-term, one-shot groups of the type run in experimental laboratories. Work groups in organizations typically proceed through multiple performance episodes, even in getting a single piece of work done, providing many opportunities for group interaction to be affected by how well a group performs.[13]

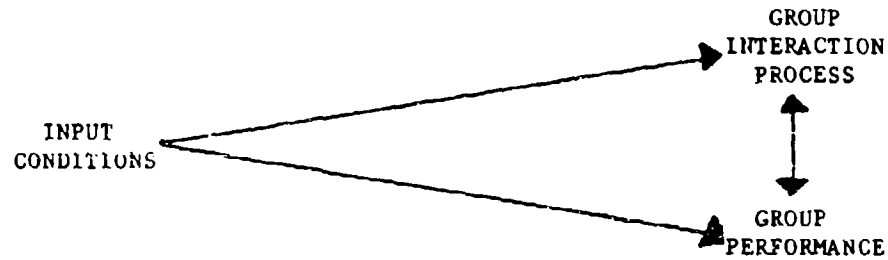
---

[13] Reflection on one's own experiences in groups that are failing ("through no fault of ours!"), or that are succeeding beyond anyone's expectation ("we must be charmed!") will provide some nonscientific evidence for the existence of a performance-to-process causal link.

(A) Input conditions affect performance outcomes only via group interaction process (traditional model)



(B) Input conditions affect both group process and group performance



(C) Input conditions affect both process and performance, plus reciprocal influence between process and performance

Figure 2. Three ways of construing input-process-output relations

Data are not currently available to determine whether these alternative perspectives are better representations of what happens in task-performing groups than the traditional view presented in Figure 1. They do, however, prompt us to think about the determinants of group effectiveness in ways that we might otherwise overlook. They raise the possibility, for example, that group interaction may be as useful as an indicator of how a group is doing in its work (i.e, as diagnostic data) as it is as a point of intervention for improving group effectiveness. And the alternative models encourage us to search for "input" factors (such as how a group is designed and linked to the surrounding organization) that can foster both high quality group process and effective task performance.

2. It may be that we have been looking at the wrong aspects of group process and examining them at the wrong level of analysis. When consultants or managers address the interaction process of a group, they usually focus on the interpersonal transactions that take place within the group: who is talking with whom (or not doing so), who is fighting with whom, who is pairing up with whom, and so on. Such interpersonal behaviors can tell a trained observer a great deal about social and emotional issues that are alive in the group, including issues driven by unconscious forces as well as those of which members are aware (see, for example, Colman & Bexton, 1975).

If, however, we are interested in group effectiveness, it may be more appropriate to focus on those aspects of interaction that relate directly to a group's work on its task. It should be possible, for example, to assess whether a group is using the energy and talents of its members well (rather than wasting or misapplying them), and to determine whether the group

interaction develops and expands (rather than diminishes) members' performance capabilities. Other ways group interaction contributes to task accomplishment also can be imagined, and also are worthy of exploration. But whatever aspects of interaction are examined, it seems highly advisable to examine them at the group (rather than the interpersonal) level of analysis, and to emphasize the task (rather than the social and emotional) significance of what transpires.[14]

Conclusion. Group interaction provides the stage on which many dramas are played out, from political intrigues to romantic encounters. Our present focus on task effectiveness does not deny the multiple purposes served by group interaction--but it does direct our attention to two aspects of group process that are particularly useful in understanding and influencing group performance.

First, interaction process can serve as an indicator of how, and how well, a group is proceeding with work on its task--a window through which one can view the group as it does its work. One can assess, for example, the level of effort the group is applying to the task, the amount of knowledge and skill members are bringing to bear on it, and the task-appropriateness of the strategies they are using in carrying out the work. As will be seen later, such data turn out to be very useful in identifying the special strengths and weaknesses of a group as a performing unit, and in guiding interventions intended to help a group improve its performance.

Second, group interaction is a potential source of "group synergy." Synergy among members results in group outcomes that may be quite different from those that would be obtained by simply adding up the contributions of

---

[14] We must recognize, nonetheless, that among the influences on task-focussed interaction are the social and emotional dynamics that occur among members.

individual members. Synergistic contributions can be either positive (e.g., development of a creative way of working that transcends some of the limitations in a group's performance situation) or negative (e.g., a failure of coordination within the group so severe that nobody knows what he or she is supposed to be doing). Whatever their direction, synergistic effects have their roots in group interaction process, and therefore attempts to alter their direction or potency necessarily will involve attention to how members relate to one another as they work together.

Summary

Descriptive research on group behavior has provided a good general understanding of what takes place in groups that perform tasks, and has generated a reasonable set of findings about the empirical associations among various input, process and output variables. Research in the descriptive tradition has been less successful, however, in generating knowledge that can be used to design and manage work teams. In exploring the reasons for this failure, we have unearthed some leads that may be helpful in developing an alternative, more action-oriented approach to work team effectiveness.

That approach will be laid out in the next section of this chapter. It gives special attention to the basic design of groups that do work and to their relationships with the organizational contexts in which they function. It moves group interaction process from center stage to a supportive (but still important) role. And, overall, the approach is normative rather than descriptive, emphasizing those factors that can be used to improve performance effectiveness--rather than focussing on descriptions of how groups actually behave in various circumstances.

A NORMATIVE MODEL OF GROUP EFFECTIVENESS

The model of work group effectiveness described in this section is an attempt to bridge between understanding group behavior (the province of the descriptive approach just reviewed) and doing something to improve it (the topic of the final section of this chapter).[15] The intent of the normative model is to identify the factors that most powerfully enhance or depress the task effectiveness of a group, and to do so in a way that increases the possibility that constructive change can occur. This requires that the variables used in the model be powerful (i.e., they make nontrivial differences in how a group performs), potentially manipulable (i.e., it is feasible to change them in an organization), and accessible (i.e., people can understand them and use them). Moreover, they must be arranged sensibly: the model is not a naturalistic chronological description of what leads to what as a group goes about its work; yet if it is to be useful, it must be plausible.

That is a reasonably tall order, and if we are to have a chance of filling it, we must be very clear about both the kinds of groups to which the model applies and what we mean by "group effectiveness."

Scope of the Model

Domain

The normative model focusses exclusively on work groups in organizations. This means that the model applies only to (a) real groups (that is, intact social systems complete with boundaries and differentiated roles among members), (b) groups that have one or more tasks to perform, resulting in

---

[15] The work of Cummings (e.g., 1978, 1981) on the design and management of work groups from a sociotechnical systems perspective has much in common with what is presented here, although it comes from a rather different intellectual tradition. For an overview of that tradition, see Trist (1981).

discernible and potentially measurable group products, and (c) groups that operate within an organizational context.

This turns out to be a fairly inclusive statement. The model would apply, for example, to a group of executives charged with deciding where to locate a new plant, a team of rank-and-file workers assembling a product, a group of students writing a case assigned by their instructor, a health care team tending to the needs of a group of patients, and a group of economists analyzing the budgetary implications of a proposed new public policy.

Nonetheless, many sets of people commonly referred to as "groups" are excluded. Social groups are out (no task), as are reference groups (not an intact social system), coacting groups (i.e., people who may report to the same manager but who have their own, individual tasks to perform--no group task), and freestanding groups (no organizational context).

This statement of domain may seem relatively straightforward, but it often is difficult to determine what is a "real" group, a "group task," and an "organizational context." A more detailed discussion of how these concepts are used to define the domain of the normative model is provided in the Appendix to this report.

Group Effectiveness Defined

In conducting experiments on group performance, researchers try to select tasks for which it is relatively easy to tell how well a group has performed: one can count the number of right answers, or measure how long it takes the group to finish, or see if the group solved the problem correctly. For teams in organizations, effectiveness criteria are more complex. Most organizational tasks do not have clean right-or-wrong answers, for example, nor do they lend themselves to quantitative measures that validly indicate how

well a group has done its work. Moreover, one needs to be concerned about more than raw productivity or decision quality when assessing groups in organizations. Unlike participants in laboratory experiments (who come in, do the task, and go home), members of work groups and committees usually continue to relate to one another long after the group task is completed; what happens in the work group can substantially affect their willingness (and their ability) to do so.

For these reasons, we use three criteria to assess team effectiveness. The first deals with the actual output of the group, the second with the state of the group as a performing unit, and the third with the impact of the group experience on individual members.

First, the productive output of the work group should meet or exceed the performance standards of the people who receive and/or review the output. If a group's output is not acceptable to its "clients" and/or to managers charged with evaluating its performance, then it cannot be considered effective. An effectiveness criterion that relies explicitly on assessments made by organization members or clients (rather than on "objective" indices of performance) was chosen for two reasons. First, reliable and valid objective criteria are available for only a small proportion of work teams in organizations; to deal only with those teams would radically restrict the domain of the model. In addition, what happens to a group and its members usually depends far more on others' assessments of the group's output than on any objective performance index (even though such assessments may be based, in part, on whatever objective measures happen to be available).[16]

---

[16] There are, however, occasions when it may not be sensible to rely on client assessments of a group's output. Consider, for example, a situation in which the legitimate clients of the group are seriously disturbed, ethnocentric, or competitive with the group. The very meaning of "good performance" under these circumstances is problematic.

Second, the social processes used in carrying out the work should maintain or enhance the capability of members to work together on subsequent team tasks. Some groups operate in such a way that the integrity of the group as a performing unit is destroyed; the group "burns itself up" in the process of performing the task. Even if the product of such a group is acceptable, it would be difficult to argue that the group has been a fully effective performing unit.

Third, the group experience should, on balance, satisfy rather than frustrate the personal needs of group members. If the primary effect of group membership is to keep individuals from doing what they want and need to do, or if members' predominant reactions to the group experience are disgust and disillusionment, then the costs of generating the group product, at least those borne by individual members, are probably too high.

The inclusion of social and personal criteria in a definition of effectiveness is a departure from tradition--as is the use of system-defined (rather than researcher-defined) assessments of a group's output. Yet the criteria themselves require neither extraordinary accomplishment nor exemplary social processes. All that is necessary is output judged acceptable by those who receive it, a team that winds up its work at least as healthy as when it started, and members who are at least as satisfied as they are frustrated by what has transpired. The challenge for researchers and practitioners is to develop ways of understanding, designing, and managing groups that help them meet or exceed these modest standards of team effectiveness.

The Basic Proposition

The normative model presented in the pages that follow rests on the validity of one key proposition. If this proposition is valid (and if its implications are appropriately developed), it should be possible to explain why some groups perform better than others, to assess the strengths and weaknesses of specific groups in organizations, and to determine what needs to be done to help a group become more effective.

Specifically it is proposed that the overall effectiveness of work groups in organizations is a joint function of:

- --the level of effort group members collectively expend carrying out task work,
- --the amount of knowledge and skill members bring to bear on the group task, and
- --the appropriateness to the task of the performance strategies used by the group in its work.[17]

We will refer to effort, knowledge and skill, and performance strategies as process criteria of effectiveness. They are the hurdles a group must surmount to be effective. To assess the adequacy of a group's task processes, then, we might ask: Is the group working hard enough to get the task done well and on time? Do members have the expertise required to accomplish the task, and are they using their knowledge and skills efficiently? Has the group developed an approach to the work that is fully appropriate for the task being performed, and are they implementing that strategy well?

---

[17] For example, a group might decide to divide itself into two subgroups, each of which would do part of the overall task, with the final product to be assembled later. Or it might choose to free associate about task solutions in the first meeting, reflect for a week about the ideas that came up, and then meet to draft the product. Or it might decide to spend considerable time checking and rechecking for errors after learning that its client cares a great deal about product quality. All of these are choices about task performance strategy.

Answers to these questions provide useful diagnostic data about a group's strengths and weaknesses as a performing unit, and they should enable us to **predict with some confidence a group's eventual performance effectiveness.** But, as strongly implied by research on interventions that focus exclusively on improving group processes, direct attempts to manipulate a group's standing on the process criteria (e.g., by exhortation or instruction) are likely to fail.

A more promising approach is to design and manage a group so that task-effective group processes emerge naturally. Several features of the group and its context potentially can lead to improvements in a group's level of effort, **its application of member knowledge and skill, and the appropriateness of its** task performance strategies. In particular, we will examine the impact of the following three classes of variables on each of the process criteria:[18]

--The design of the group as a performing unit: the structure of the group task, the composition of the group, and group norms that regulate member behavior.

--The organizational context of the group: the reward, education, and information systems that influence the group, and the material resources that are put at the group's disposal.

--Group synergy resulting from members' interactions as they carry out the task.[19]

Throughout, we will emphasize aspects of group design, context, and synergy that foster both high quality task behavior and eventual team effectiveness. After completing this analysis, we will explore ways of

---

[18] For simplicity, feedback loops among classes of variables in the framework (e.g., how the organizational context may change in response to a team's level of effectiveness) are not shown or discussed here.

[19] As applied to group behavior in this chapter, synergy refers to group-level phenomena that (a) emerge from the interaction among members and (b) affect how well a group is able to deal with the demands and opportunities in its performance situation.

assessing the standing of a group on the variables in the normative model, and speculate about the implications of the model for the creation and management of work teams in organizations.[20]

Conditions that Support Effort

Group members are most likely to work hard on their task if (a) the task itself is motivationally engaging, (b) the organizational reward system provides challenging performance objectives and reinforces their achievement, and (c) interaction among members minimizes "social loafing" and instead promotes a shared commitment among members to the team and its work. These factors are illustrated in Figure 3 and discussed below.

Design of the Group

We would expect a group to work especially hard on its task when the following conditions are met:

- --The group task requires members to use a variety of relatively high level skills.
- --The group task is a whole and meaningful piece of work, with a visible outcome.
- --The outcomes of the group's work on the task have significant consequences for other people (e.g., other organization members or external clients).
- --The task provides group members with substantial autonomy for deciding about how they do the work--in effect, the group "owns" the task and is responsible for the work outcomes.
- --Work on the task generates regular, trustworthy feedback about how well the group is performing.

If a group task meets these criteria, it is likely that members will experience their work as meaningful, they will feel collectively responsible for the products they create, and they will know, on a more or less continuous

---

[20] Some of the material that follows is adapted from Hackman and Oldham, 1980, Ch. 7-8.

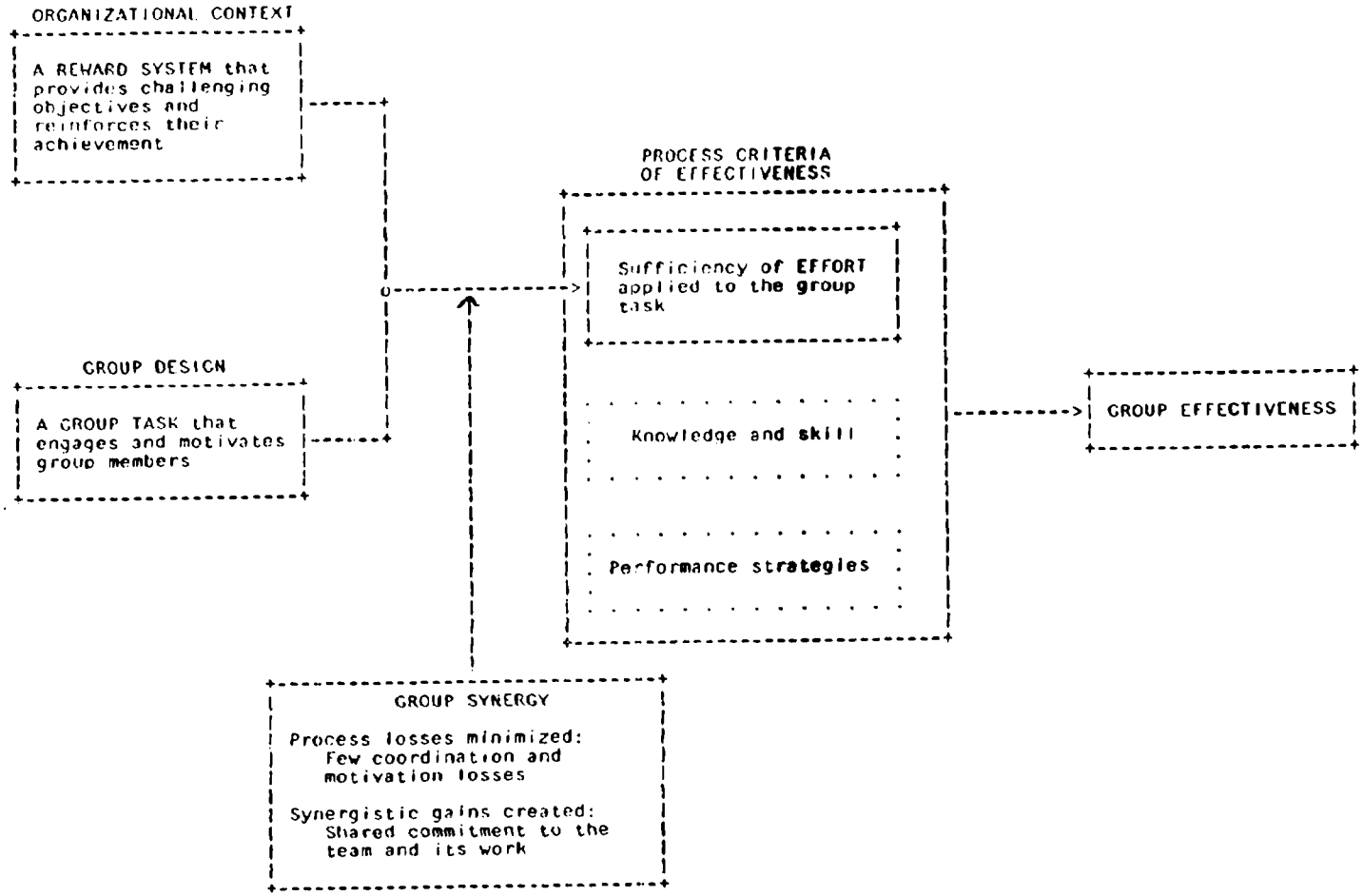


Figure 3. Conditions that foster hard work on a group task

basis, how they are doing. And, extrapolating from Hackman and Oldham's model of individual task motivation (1980, Ch. 4), a group task with these properties should result in high built-in motivation for a group to try hard to do well (see, for example, Wall and Clegg, 1981).

This emphasis on the group task runs counter to traditional wisdom about motivated work behavior. One often hears managers report that some group is "filled with lazy [or hard-working] people," or that group members "have a norm of not working very hard [or of always giving their best]." It is true that people have different chronic energy levels, but there is not much one can do about that. And while norms do emerge in groups that encourage especially high or low effort, such norms usually develop as a reaction to how things are set up, as a means of coping with the group task and work situation.

Thus, if a group's work is routine and unchallenging, of dubious importance, and wholly preprogrammed with no opportunity for feedback, members are likely to develop anti-productivity norms. But if a group task is challenging, important to the organization or its clients, "owned" by the group, and consequential for group members, then a norm encouraging high effort on the task is likely to emerge. Improving the design of a group's work is usually a better way to foster high collective effort than directly addressing group norms about productivity.

Organizational Context

A supportive organizational reward system can reinforce the motivational benefits of a well-designed team task, and a poorly structured reward system can undermine and erode those benefits. Reward systems that support high effort by work teams tend to have the following three features.

Challenging, specific performance objectives. There is a great deal of research evidence that goal-directed effort is greater when a group accepts moderately difficult performance objectives and receives feedback about its progress in attaining those objectives (Zander, 1971; 1980). When the organization specifies a challenging performance target (e.g., a date by which the work must be done, the number of items to be produced, a quality level to be achieved), members often mobilize their efforts to achieve that target. Objectives, however, should supplement rather than replace task-based motivation. A group is unlikely to persist in working toward challenging objectives if its task is inherently frustrating and alienating.

Positive consequences for excellent performance. A reward system that recognizes and reinforces excellent group performance can complement and amplify the motivational incentives of a well-designed group task. People tend to engage in behaviors that are rewarded, and people in groups are no exception (Glaser & Klaus, 1966). Which specific kinds of rewards will work best, of course, depends on what group members value. Sometimes simple recognition of excellence will be appropriate; other times, more tangible rewards will be needed. But whatever the content of the consequences, their impact on team effort will be greater if members understand that they are contingent on performance--i.e., that the group will receive them only if it earns them by performing well.

Rewards and objectives that focus on group, not individual, behavior. When rewards are given to individuals based on managers' judgments about who has contributed most to a group product, dissension and conflict often develop within the group. This is the dilemma of the athletic coach, who must try to motivate the team as a whole while simultaneously cultivating and reinforcing

individual performance. And it is a problem routinely faced by managers of work teams in organizations where the reward system has traditionally focussed on the identification and recognition of excellent individual performers.

The destructive effects of rewarding individual contributions rather than team performance can be considerable. Therefore, if it is not feasible to provide performance-contingent rewards to the group as a unit, it may be better to base rewards on the performance of even larger groups (such as a department or division), or not to use contingent rewards at all, than to invite the divisiveness that can develop when members of a team are put into competition with one another for scarce and valued rewards (Lawler, 1981).

Group Synergy

Group synergy can contribute to effective task behavior in two ways. First, group members can find innovative ways to avoid "process losses," and thereby minimize waste and misuse of members' time, energy and talent. Second, members can interact synergistically to create new internal resources that can be used in their work, capabilities that did not exist before the group created them. Process losses and synergistic gains that affect how much effort a group applies to its task are discussed below.

Minimizing coordination and motivation losses. There are always some "overhead costs" to be paid when groups perform tasks. The need to coordinate member activities, for example, takes time and energy away from productive work, resulting in a level of actual productivity that is less than what theoretically would be possible with optimum use of member resources (Steiner, 1972). In addition, group productivity often is compromised by what Steiner terms "motivation decrements" and what Latané (e.g., Latané, Williams & Harkins, 1979) has called "social loafing." As groups get larger, the amount

of effort each member contributes to the group task decreases--perhaps because each individual feels less responsible for the outcome than would be the case in a smaller group or if one person were doing the task alone.

Some groups suffer much greater coordination and motivation losses than others. And group members can cultivate process skills that help them behave in ways that minimize such losses. But if the group is large or if the task is ill defined or alienating, it may be impossible for the group to avoid serious coordination and motivation losses.

Creating shared commitment to the team and its work. Some groups show great "spirit": everyone is committed to the team, proud of it, and willing to work hard to make it one of the best. When individuals value their membership in the group and find it rewarding to work collaboratively with their teammates, they may work considerably harder than they would otherwise. Managers often engage in group-building activities (such as encouraging members of an ongoing team to give the group a name, to decorate their work area, or to participate in an athletic league as a team) in the hope of increasing members' commitment to the group and their willingness to work especially hard on the group task.[21]

Commitment to a team sometimes can result in high effort on the group task even when objective performance conditions are highly unfavorable (e.g., a team that develops a "can do" attitude and comes to view each new adversity as yet another challenge to be met). It is questionable, however, whether such commitment is sustainable if performance conditions remain poor (e.g., a frustrating or alienating group task, or a reward system that does not recognize excellence).

---

[21] Such activities are not risk-free. "Team spirit" can evolve into group ethnocentrism and can prompt dysfunctional competition and conflict between groups.

Conditions that Support Knowledge and Skill

A group is most likely to bring sufficient talent and expertise to bear on its task when (a) the group has an appropriate number of members with a good mix of skills, (b) the education system of the organization offers training or consultation as needed to supplement members' existing knowledge, and (c) group interaction avoids inappropriate "weighting" of members' contributions and instead fosters sharing of expertise and collective learning. These factors are illustrated in Figure 4 and discussed below.

Design of the Group

A group's composition is the most important condition affecting the amount of knowledge and skill members apply to their task. Well-composed groups have the following four characteristics.

Individual members have high task-relevant expertise. The most efficient way to make sure a group has the expertise it needs for its work is simply to assign talented individuals to it. This seemingly obvious principle, however, is not always straightforward in practice. Even when people with ample task-relevant knowledge and skill are available, they may be overlooked--for example, when groups are composed with only political considerations in mind. This can result in a team whose members cover all the right bases, but one that is not capable of carrying out well the work it was created to do.

The group is just large enough to do the work. If a task requires four sets of hands, then there should be four people in the group--but no more than that. The research literature offers abundant evidence documenting the dysfunctions that occur in large groups (see Steiner, 1972, Ch. 4 for a

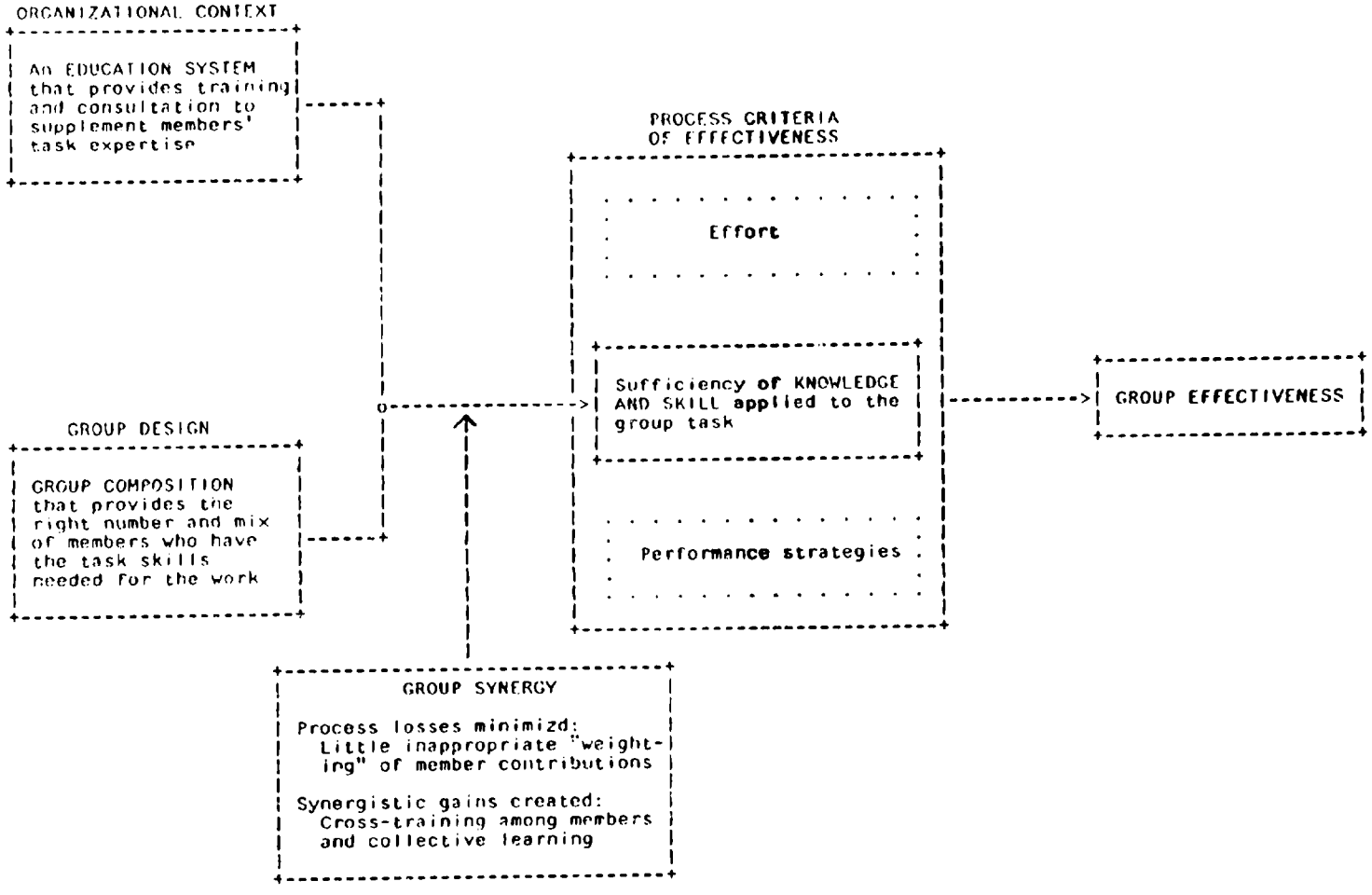


Figure 4. Conditions that foster effective use of talent and expertise in task work

review), and establishing the advantages of groups that are slightly smaller than what the task technically requires (Wicker, Kirmeyer, Hanson & Alexander, 1976). Yet large work groups (especially decision-making committees) are widely used in organizations. Often the decision to put additional people in a group allows managers to avoid difficult personnel choices or sensitive political issues (e.g., how to involve a department in the work of a task force on which it has no representatives), but the cost may be losses in the quality of the group product and the efficiency with which it is produced.

Members have interpersonal as well as task skills. If a group task is well designed (i.e., it provides the group considerable autonomy in managing a challenging piece of work), then at least moderate interpersonal skills are required to bring the task skills of members to bear on the group's work--especially if members are diverse (i.e., they come from different demographic groups, represent different organizational units, or have divergent personal views on the matter at hand). Some individuals have little competence in working collaboratively with other people, especially if those people differ from themselves in important ways. Even one or two such individuals can significantly impede the ability of a group to bring members' expertise effectively to bear on the group task.

Membership is moderately diverse. Members of an excessively homogeneous group may get along well together but lack the resources needed to perform the task because the members essentially replicate one another. An excessively heterogeneous group, on the other hand, may have a rich complement of talent within the group, but be unable to use that talent well because members are so diverse in values or perspective that they cannot work together effectively. The aspiration in composing a group is to strike just the right balance

between homogeneity and heterogeneity: members should have a variety of talents and perspectives, yet be similar enough that they can understand and coordinate with one another.[22]

Organizational Context

Sometimes a group has within its bounds all the knowledge and skill needed for optimum task performance. More commonly, there are aspects of the work for which additional talent or expertise would be helpful. The educational system of the organization can play a useful role in helping the group obtain the outside expertise it needs for its work.

For this potential to be realized, two conditions must be met. First, relevant educational resources (which can include technical consultation as well as training) must exist somewhere in the organization. Second, some sort of "delivery system" must be in place to make those resources accessible to the group. This may not be a simple matter for rank-and-file teams in organizations where employees have never had the right to call on staff resources.

The particular kind of assistance required will, of course, depend on both the task requirements and the specific needs of the group. And the appropriate form of the assistance will vary as well. Sometimes a one-shot technical consultation will suffice; sometimes, a continuing consulting relationship will be needed; and sometimes a training program for group members will be more appropriate, to build the relevant expertise into the group itself. Whatever the content of the assistance and the vehicle used to provide it, the role of the educational system is the same: to help groups

---

[22] A number of scholars have examined the impact of member compatibility on task behavior and performance. See, for example, Belbin (1981); Hewett, O'Brien and Hornik (1974); and Schutz (1958; 1961).

that do not have the full complement of knowledge and skill required for excellent task performance obtain it.

Group Synergy

Minimizing inappropriate weighting of member contributions. The knowledge and skill of group members can be wasted if the group solicits and weights contributions in a way that is incongruent with members' expertise--as when the credence given a member's idea depends on such task-irrelevant considerations as his or her demographic attributes (e.g., gender, ethnicity, or age) or behavioral style (e.g., talkativeness or verbal dominance). This process loss has been well documented in the research literature (e.g., Johnson & Torcivia, 1967; Thomas & Fink, 1961; Torrance, 1954). Groups often have trouble assessing which members have the special expertise needed for the task, and they appear to have even more difficulty explicitly acknowledging these differences and weighting members' contributions in accord with them. To the extent a group is able to minimize this problem, it will take better advantage of the expertise that was put in the group when it was composed.

Fostering collective learning. When members of a group interact in ways that help them learn from one another, they can increase the total pool of talent available for task work--a synergistic gain from group interaction. The practice of "cross-training," often encouraged in autonomous work groups in industry, is an example of such behavior, as are more informal activities that involve the sharing of knowledge, expertise, and experience among members. A group that orients itself to collective learning and whose members share what is learned with each other should be far better able to exploit the educational resources of an organization than a group that takes a laissez-faire stance toward the development of its internal talent.

Conditions that Support Appropriate Performance Strategies

The likelihood that the group will employ a task-appropriate performance strategy increases when (a) group norms support explicit assessment of the performance situation and active consideration of alternative ways of proceeding with the work, (b) the information system of the organization provides members with the data they need to assess the situation and evaluate alternative strategies, and (c) group interaction results in little "slippage" when performance plans are executed and instead prompts creative new ideas about ways to proceed with the work. These factors are illustrated in Figure 5 and discussed below.

Design of the Group

Group members typically reach agreement about how they will go about performing their task relatively early in their time together. Indeed, for familiar tasks, members may not talk about their strategy at all, since it is obvious to everyone how the task should be done. Once a strategy is agreed to, whether implicitly or explicitly, members tend to behave in accord with it and enforce adherence to it (March & Simon, 1958, Ch. 6). Performance strategies thus become part of the fabric of the group, a "given" that is no more open to question than the task of the group or who is in the group.

The specific strategies that will be most appropriate for a given group depends both on the task to be done and on the imperatives and resources in the performance situation. No "one best strategy" can be specified in advance for most task-performing groups in organizations. It is possible, however, to build group norms that increase the likelihood that members will develop task-appropriate performance strategies and execute them well. Such norms have the two properties discussed below, the first being a prerequisite for the

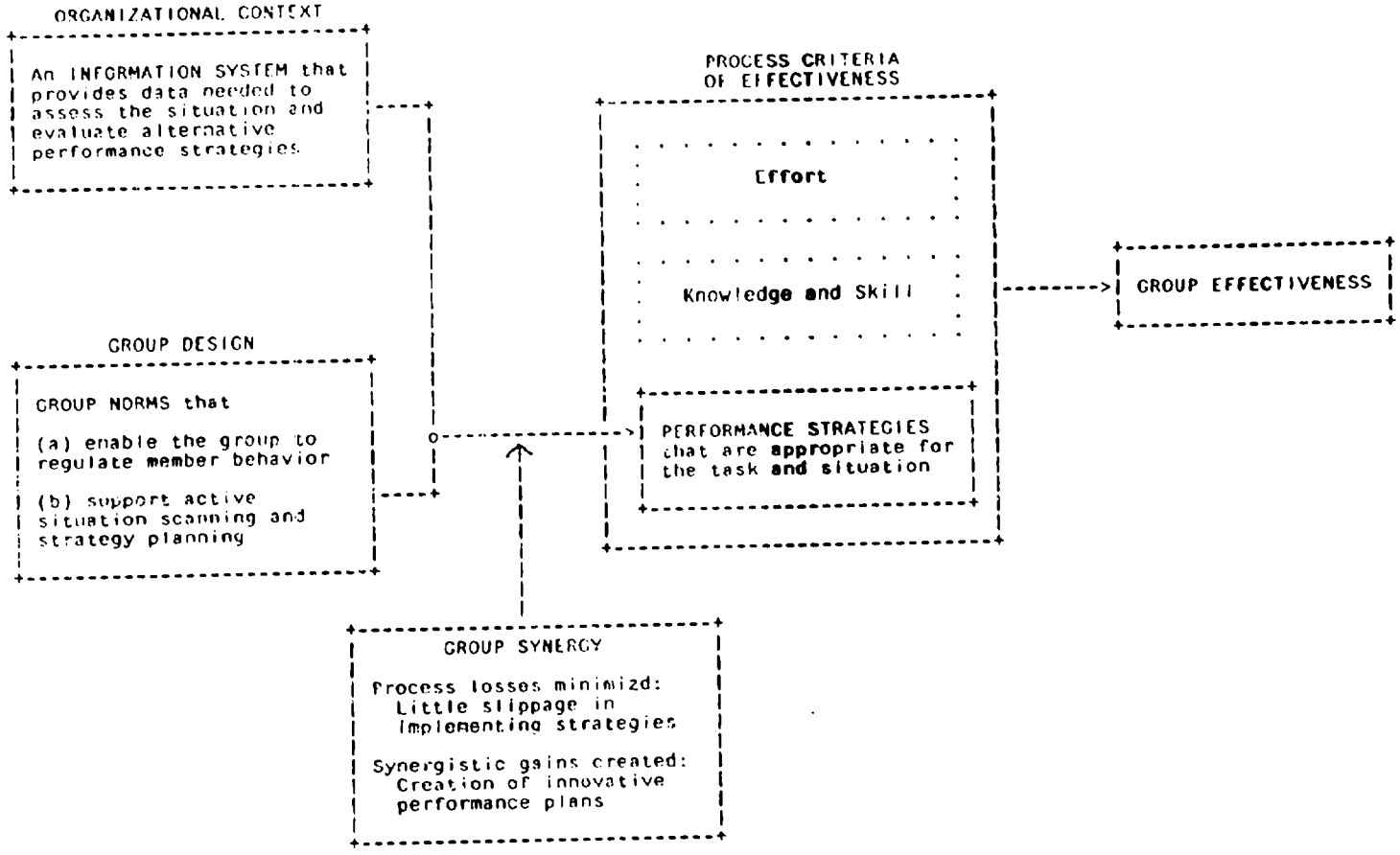


Figure 5. Conditions that encourage the use of task-appropriate performance strategies

second.[23]

Group norms support self-regulation. Behavior in some groups is so chaotic and subject to individual whim as to approach anarchy. Such groups are unlikely to be able to execute any performance strategy in an orderly fashion, even one that has been specified in detail by management. Thus, a normative structure that enables a group to regulate member behavior is essential to the efficient execution of performance strategies. This requires that behavioral norms be sufficiently crystallized (i.e., members have consensus about them) and intense (i.e., compliance results in substantial approval or avoidance of substantial disapproval by other members) that individuals will wish to behave in accord with them (Jackson, 1965).

Group norms support situation scanning and strategy planning. Groups that actively assess the demands and opportunities in the performance situation, and consider several alternative ways of proceeding with the work, tend to develop more appropriate performance strategies than groups that do not (Hackman, Brousseau & Weiss, 1976; Maier, 1963). Yet such activities tend not to take place spontaneously. Instead, it appears that the general disinclination of group members to "talk about process" extends even to discussions about how the work of the group will be carried out.[24]

---

[23] Following Jackson (1965), norms are conceptualized as structural features of a group that summarize members' shared approval (or disapproval) of various behaviors. Norms simplify group influence processes because they make it possible for members to count on certain things being done, and other things not being done. For more detailed discussion of how norms structure and channel behavior in a group, see Hackman (1976).

[24] Spontaneous strategy planning does, of course, occur if a task is so novel that members are at a loss about how to proceed with it, and is generally more likely when the task is unfamiliar.

For this reason, it is necessary somehow to prompt or encourage group members to engage in situation scanning and strategy planning activities. **Group norms provide an efficient and powerful way to accomplish this.** Such norms focus attention on opportunities and constraints that might otherwise be overlooked and make it difficult for members to fall into familiar or habitual patterns of behavior that may be inappropriate for the particular task at hand.[25]

Group norms governing performance processes can be established when a group is first formed or introduced during a hiatus in the work when members are ready to reconsider how they operate as a team. Regardless of how and **when they are developed, the norms that guide a group's performance processes are an important structural feature of the group--an aspect of group design** that often has been overlooked by both scholars and managers interested in work team effectiveness.

Organizational Context

The information system of an organization is critical to a group's ability to plan and execute a task-appropriate performance strategy. If a group cannot obtain clear information about its performance situation, or if it does not have access to data about the likely outcomes of alternative approaches to the task, it may develop a way of proceeding that seems reasonable to group members but that turns out, when executed, to be grossly inappropriate.

---

[25] This analysis presumes that a team has at least some latitude for planning its own strategy. Usually this is the case. In some groups, however, behavior is so completely preprogrammed or closely supervised that members have essentially no strategy choices to make. For such groups, there is little need for a norm supporting scanning and planning, since those activities are someone else's responsibility. All that is needed is the orderly execution of the strategy that has been supplied. The implications of giving a team the authority to devise its own strategies (rather than reserving that authority for management) are explored later in this chapter.

Clarity about the parameters of the performance situation. To develop a task-appropriate performance strategy, a group needs a relatively clear map of the performance situation. Of special importance is information about (a) task requirements and constraints that may limit strategic options, (b) the material resources that are available for use, and (c) the people who will receive, review, and/or use the group product--and the standards they are likely to employ in assessing its adequacy.

Access to data about likely consequences of alternative strategies. The information system also should make available to a group the data and analytic tools members need to compare and evaluate the probable consequences of alternative performance strategies. Consider, for example, a manufacturing team that is attempting to decide how to approach a complex assembly task. One possibility might be a cyclic strategy, in which all members build components for a period of time, then assemble final products (producing a relative flood of output), followed by another component-building period, and so on. How would this strategy compare to one in which some members build components continuously while others are dedicated to final assembly? To choose between these strategies, the group needs information about the timing of demand for their product, the availability of space for storing components and completed products, and the cost of obtaining and holding parts for use in batch component production. It would be quite risky for a group to choose a strategy without data about such matters.

How much information a group needs depends in part on how much latitude it has to manage its own affairs. Groups that have the authority to invent their own strategies and manage their own performance processes will need

relatively complete data on both the parameters of the performance situation and the likely consequences of alternative ways of proceeding. Groups with less authority for setting their own directions will have less need for such data.

Managers who control access to performance-relevant information must make sure that data needed by a team are realistically available to it. This is not always easy: the relevant data may not exist, they may be costly to obtain, or the manager may be unable to convince his or her colleagues that it is appropriate to share with the group politically or competitively sensitive information. In such circumstances, the group needs to know that--i.e., that it will have to make do with imperfect or incomplete data.[26] Care also must be taken not to flood the group with excess or irrelevant information, data members must process but for which they have no present use. Some organizations minimize this risk by initially providing teams only with basic data about the parameters of the performance situation and a guide to other information that is available. The group has the responsibility for deciding what additional data it requires and for determining when and how to obtain it.

Group Synergy

Minimizing slippage in strategy implementation. Plans are never perfectly implemented--there is always a slip or two, something that wastes or misdirects the time and energy of group members, compromising even well-conceived plans. To the extent a group minimizes this process loss, the

---

[26] Particularly unfortunate are occasions when a manager deliberately withholds performance-relevant information from a group, to make sure the group remains dependent on him or her. While this may preserve a manager's feelings of personal power, it can result in inappropriate performance strategies and needlessly poor team performance.

opportunities provided by norms that foster strategy planning and by a supportive information system can be well used. But if slippage is high, the group may fail to exploit even a highly favorable performance situation.[27]

Creating innovative strategic plans. On the positive side, groups can develop ways of interacting that occasionally result in truly original or insightful ways of proceeding with the work. For example, a group might find a way to exploit some resources that everyone else has overlooked, it might invent a way to get around a seemingly insurmountable performance obstacle, or it might come up with a novel way to generate ideas for solving a difficult problem. When group members get in the habit of thinking creatively about how they will do their work, interesting and useful ideas can emerge--ideas that did not exist before the group invented them.

Overview and Summary

An overview of the normative model is presented in Figure 6. It shows three major points of leverage for fostering group effectiveness: (a) the design of the group as a performing unit, (b) the supports provided by the organizational context in which the group operates, and (c) the synergistic outcomes of the interaction among group members. The contributions of each of these classes of variables are summarized briefly below.

---

[27] One particularly virulent form of this process loss bears special mention. Members of some groups collude with each other in a way that makes it impossible ever to implement performance plans. Such a group may have ample information about the performance situation, and develop a fully task-appropriate performance strategy. But once the plans are complete they are ignored. When members reconvene, they develop new plans and a new resolve, and the cycle repeats itself. The group acts as if a good strategy is all that is needed for team effectiveness, and its inevitable failures are always well-wrapped in new and better plans for the future. This kind of synergy often is driven by unconscious forces, it is not uncommon in groups that have high-pressure work environments, and it can be lethal to team effectiveness.

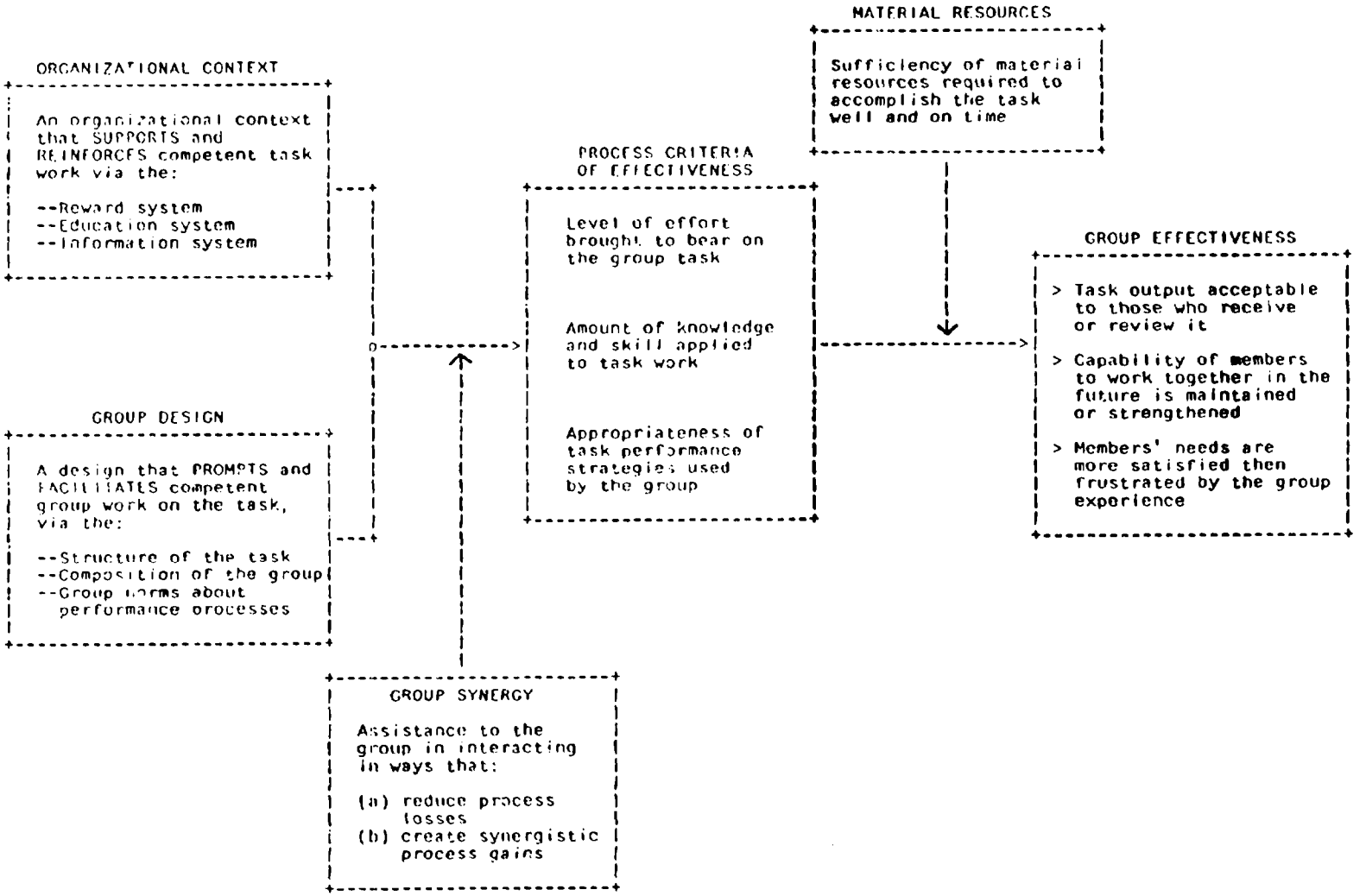


Figure 6. An overview of the normative model of group effectiveness

Design. The design of a group--task structure, group composition, and group norms--should promote effective task behavior and lessen the chances that members will encounter built-in obstacles to good performance. While a good group design cannot guarantee competent group behavior, it does create conditions that make it easier and more natural for task-effective behaviors to emerge and persist.

Context. The organizational context of a group--the reward, education, and information systems of the organization--should support and reinforce the design features. A supportive organizational context gives a group what it needs to exploit the potential of a good basic design (although it probably cannot compensate for a fundamentally flawed design). An unsupportive organizational context can easily undermine the positive features of even a well-designed team. Excellent group performance requires both a good design for the team and a supportive organizational context.

Figure 6 shows one important contextual feature not previously discussed: the material resources required to do the work. If a group lacks the tools, equipment, space, raw materials, money, or human resources it needs, its performance surely will suffer--even if it stands high on the process criteria of effectiveness. A talented, well-motivated production team, for example, will not perform well if the raw materials it needs to make its products are not available, or if production tools are unsatisfactory. Similarly, a committee formed to select a new agency manager cannot be successful if there are no qualified candidates available. And a group that provides human services to clients may have performance problems if members' work stations are so spread about that they cannot coordinate their activities, or if money

is so scarce that needed support staff cannot be obtained.[28]

Synergy. Group synergy "tunes" the impact of design and contextual factors. Positive synergy--that is, when the synergistic gains from group interaction exceed group process losses--can help a group overcome the limitations of a poor performance situation (e.g., a badly designed group task or an unsupportive reward system). And if performance conditions are favorable, positive synergy can help a group exploit the opportunities those conditions provide. Negative synergy, when process losses exceed synergistic gains, has opposite effects. It can amplify the negative impact of a poor performance situation, and it can prevent a group from taking advantage of favorable circumstances. The relationship between performance conditions (i.e., the group design and the organizational context) and group synergy are illustrated in Figure 7.[29]

The normative model that has been discussed in this section specifies a number of factors that should be present if a group is to perform well. It does not say how the strengths and weaknesses of a group can be assessed, nor does it specify what managers can do to create an effective work group. We turn to these questions next.

---

[28] The importance of mundane aspects of the performance situation such as these are increasingly being recognized as critical to effective work performance (see, for example, Peters & O'Connor, 1980, and Peters, O'Connor & Rudolf, 1980). To overlook them is to jeopardize the effort expended to design a team well and provide it with appropriate contextual supports.

[29] Although performance conditions and group synergy are placed on separate axes in the figure, they are not independent: positive synergy is more likely under favorable conditions, and negative synergy is more likely under unfavorable conditions. Thus performance spirals can develop. For example, good group performance can lead to management decisions that improve the group's performance situation, which promotes positive synergy, which results in even better performance, and so on. Equally plausible is a negative spiral, in which poor performance begets organizational "tightening up," resulting in negative synergy, and so on.

GROUP SYNERGY	PERFORMANCE CONDITIONS (Group Design and Organizational Context)	
	Unfavorable	Favorable
Predominantly Negative	Amplification of the impact of performance-depressing conditions	Failure by the group to exploit opportunities in the performance situation
Predominantly Positive	Damping of the negative impact of performance conditions; perhaps transcending their effects for a limited time	Full exploitation of favorable performance conditions

Figure 7. Consequences for task behavior of the interaction between performance conditions and group synergy

TOWARD AN ACTION MODEL FOR IMPROVING GROUP EFFECTIVENESS

The normative model has helped us understand what should be present for a group to perform well. We now turn to some issues that arise in attempting to create those conditions. We will examine (a) the diagnosis of work teams, with special emphasis on assessing group task demands and the amount of authority groups have to manage their own affairs, (b) the creation and development of new work groups, and (c) requirements for the behavior of group managers.

Ultimately we need a theory of action that deals explicitly with implementing the prescriptions of the normative model (Argyris, 1980; 1983). Such a theory would recognize the fact that many group phenomena are the product of multiple, interdependent factors, a kind of causation not well handled by traditional scholarly paradigms in social and organizational psychology. A theory of action would address the development of task-oriented groups over time, and suggest ways to encourage self-reinforcing spirals of increasing effectiveness (and to avoid spirals of decreasing effectiveness). And it would give explicit attention to ways authority can be used to empower groups and support competent group behavior. While much remains to be learned, the following discussion should at least provide some leads worth pursuing in developing a true action model of group effectiveness.[30]

Diagnostic Use of the Normative Model

If a normative model is to be useful in designing, managing and consulting to work groups in organizations, it must be possible to assess the standing of work teams on the model-specified concepts. The model described

---

[30] For a skeptical view of the value of pursuing this objective, see Goodman, Atkin and Ravlin (1982).

above, for example, allows one to determine what aspects of a group's design, context and process are strongest, and where improvement is most needed. Such an assessment can be made either informally (e.g., by a manager seeking a quick diagnosis of the assets and liabilities of a team) or more systematically (e.g., for research purposes, or in preparing for a planned intervention).[31]

This kind of diagnosis can point to possible interventions for improving group effectiveness. One might discover, for example, that a given group is working hard on its task and using a fully appropriate performance strategy, but that members frequently make substantive mistakes and errors of judgment in their work. One would then look carefully at the composition of the group, the educational and consultative resources available to it, and its methods of assessing, weighting and applying the knowledge and skills of its members.

Some additional information about a group and its work is required, however, to make sure that an intervention is appropriate. Specifically, one needs to know (a) what aspects of the group's design, context, and behavior are most critical to effectiveness for the specific work being done, and (b) who has the authority to make changes in those aspects of the performance situation. Without such information, one risks taking actions that miss the mark because they deal with the wrong things or the wrong people.

Critical Task Demands

What is key to group effectiveness for one task can be totally irrelevant for another. Consider, for example, a team of park maintenance workers. Its performance will depend mostly on the effort members put into their work. No

---

[31] A strategy for assessing the standing of a group on these concepts using multiple methods is under development; for a preview of these methods, see Hackman (1982).

special knowledge and skill is required (the work is mainly raking and picking up debris), nor is there much room for team decision-making about performance strategy. The success of an advertising team developing an idea for a new campaign, on the other hand, may depend far more on performance strategy and on knowledge and skill than on effort. Different tasks have different critical demands, and orient attention to different process criteria of effectiveness.[32]

Interventions should focus on the factors that most powerfully affect a group's standing on whatever process criteria are critical for the task being performed. So, for the park workers, special attention should be given to the motivational properties of the group task, to the organizational reward system, and to group processes that affect member coordination and team spirit. For the advertising workers, on the other hand, attention should focus on those aspects of group design, context, and synergy that can improve a group's use of knowledge and skill and the appropriateness of its performance strategy.

All three process criteria are salient, at least to some degree, for most tasks done by groups in organizations. Yet one or two of them usually are <u>especially</u> important to team effectiveness in a particular case. By focussing on the design and contextual factors associated with these criteria, managers can improve the yield from the limited time they have to spend on team design and management.

---

[32] The idea of characterizing tasks in terms of their critical demands originated with Roby and Lanzetta (1956). Herold (1978) has developed a strategy for assessing task demands that has direct implications for interventions intended to improve group effectiveness. In brief, the approach involves separate measurement of the social complexity and the technical complexity of task requirements. Interventions, which are selected on the basis of the task analysis, help the group deal with the most challenging aspects of its work.

It is not always simple, however, to analyze the critical demands of a group task and to trace their implications for team design and management. Thus, the present approach contrasts with the relatively casual and intuitive style of team management often practiced in contemporary organizations. The hope is that the extra thought and effort required will, in fact, result in groups that perform better than those designed and managed in traditional ways.

Distribution of Authority

The appropriate focus of an intervention also depends on how authority is distributed in the organization--specifically, who is responsible for managing what aspects of the performance situation. Who, for example, has responsibility for the routine monitoring and management of group performance processes? Who has responsibility for creating and fine-tuning the design of the group? Who has responsibility for structuring and managing the performance context?

The division of authority between the group and management varies from organization to organization, and from group to group within an organization. Three typical configurations are illustrated in Figure 8. As will be seen, the targets of action intended to improve team effectiveness are quite different for the three configurations.

Manager-led work teams. These teams have responsibility only for the actual execution of their assigned work. Management is responsible for monitoring and managing performance processes (i.e., taking any action needed to change what is being done or how it is being done); for designing the group as a performing unit (i.e., structuring the group task, composing the group, and setting basic norms of acceptable behavior); and for structuring the

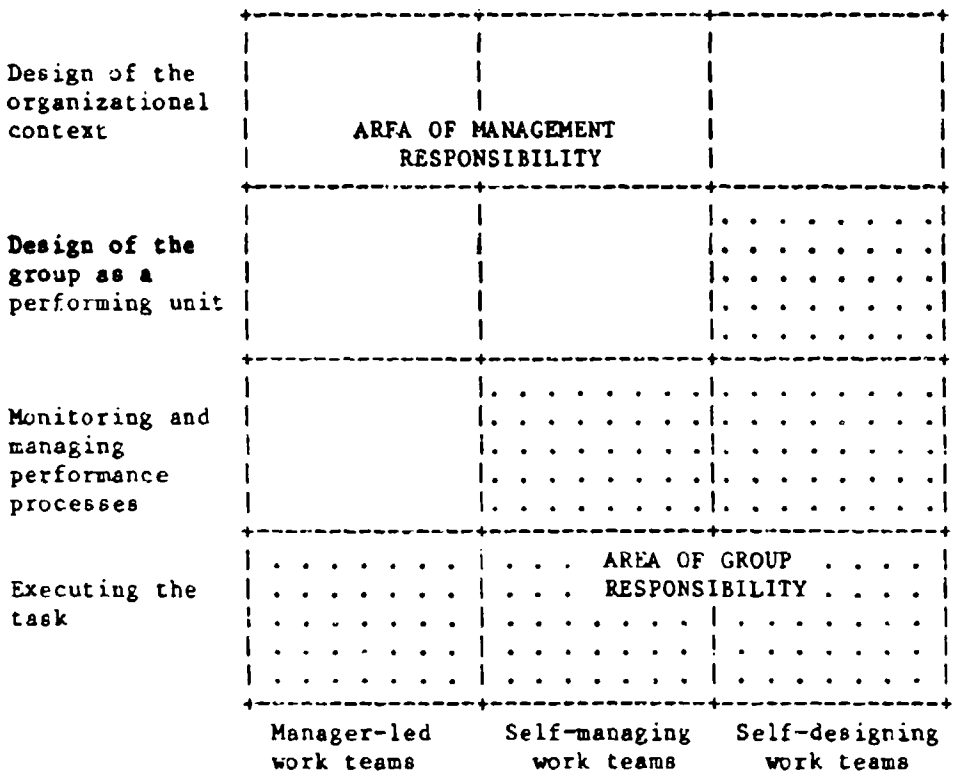


Figure 8. Authority of three illustrative types of work groups

organizational context in which the group functions (i.e., establishing supportive reward, education, and information systems).

Examples of manager-led groups include a military squad continuously provided with detailed instructions by the sergeant, and a crew of flight attendants whose duties have been choreographed in advance by planners and whose execution of these duties is monitored by an in-flight supervisor. How well a manager-led team performs depends much more on management than on decision-making by the group itself.

Self-managing work groups. For these groups, management has responsibility for the organizational context and for the design of the group as a performing unit. Group members are responsible for monitoring and managing their own performance processes, as well as for actually executing the task. Examples include a faculty search committee, many "autonomous work teams" in industry, and a managerial task force charged with the design of a new compensation system. How well a self-managing group performs depends both on the quality of the team design and organizational context provided by management and on the competence of the group in managing and executing its work.

Self-designing work groups. For these groups, management has responsibility only for the team's organizational context. Group members are responsible for the design of their team (including structuring their task, deciding who will join or leave the group, and evolving their own norms to guide decision making about performance processes), as well as for the management and execution of work on the task.

Top management groups and boards of directors usually are relatively self-designing in character (although the major portion of their performance

context typically is external to the organization). Self-designing groups are found less frequently in the middle and lower regions of traditional organizations. Examples include a mature autonomous work team that has earned the right to revise its own design (e.g., to hire new members, to alter its task if necessary, and so on), and a labor-management "quality of work life committee" with a broad mandate to bring some people together to generate programs for improving organizational life. How well a self-designing group performs, obviously, depends much less on management than on the group itself.[33]

Summary. An organization that chooses to form manager-led work groups is essentially betting that a manager can run things more effectively than group members can; if it is believed that the group itself can do the job better, a self-designing group would be appropriate; and if shared control over the performance situation and performance processes seems optimal, a self-managing group would be chosen.

A manager or interventionist interested in improving team effectiveness should attend carefully to the way authority is allocated between a work group and its manager. To aim an intervention properly, one needs to know who has authority over what aspects of the performance situation. Moreover, it is important to assess how appropriate the distribution of authority is for the work to be done, and for the organizational culture within which the group exists. Sometimes the level of authority a group needs to do its work well

---

[33] There also are a few groups, largely in cooperative or worker-owned enterprises, whose members have responsibility for all aspects of the performance situation, including deciding their own purpose and establishing their own work context. Although rarely found in traditional industrial firms or public bureaucracies, such groups are good laboratories for learning about the problems and opportunities associated with very high levels of group autonomy.

will conflict with organizational norms or standard organizational practices. In such cases, implementing a good team design may involve negotiating a redistribution of authority within the organizational unit--something not to be undertaken lightly.

Guidelines for Creating Work Teams

What are the implications of the normative model for creating effective teams? The quick answer, of course, is that teams should be set up so that they rank high on each of the variables in the model. But that is more easily said than done, and creating an effective team usually involves difficult choices among design alternatives.

Four stages in creating and developing work groups are discussed below. Within each stage, certain questions must be answered, one way or another, as a group is designed and built. The normative model provides some possible answers to these questions, and we will refer to it frequently as we proceed. But the choice of the question format (rather than specifying fixed steps to be followed, for example) is deliberate. There are many ways to structure and manage a team, and one must actively think about and select among the available alternatives at each choice point. It is both inevitable and appropriate that these decisions will be guided as much by cultural, political and technological realities as by any normative model of team effectiveness.

Stage One: Prework

When a decision or task arises in an organization, managers often reflexively form a committee or create a task force to handle it. And the group sometimes turns out not to be a very good device for doing what needs to be done. A bit of thought before a group is created can decrease the

likelihood that a team will be formed when it should not be, and improve the design of those teams that are created.

The objective in the prework phase is to establish the basic parameters of the performance situation: the nature of the work to be done, the feasibility of using a group to do it, and the appropriate partitioning of authority and responsibility between the group and its managers.

Question 1: What is the task? Sometimes nobody knows: not the group, and not the person who created the group. It is, of course, virtually impossible to design and support a group well if one does not know what it is supposed to accomplish. And, for group members, a vague and obscure task invites frustration and conflict. It is hard to excuse a manager who creates a group without a clear purpose.[34]

In some cases, the group is a deliberate sham. It may have been formed simply to give angry people a setting in which to blow off steam, for example. Or it may have been assigned a decision-making task to buy time while the real decision-makers make their moves behind the scenes. Or it may have been created solely to provide a platform for a politically important manager to have his or her say. In other words, groups often serve organizational purposes other than getting work done. Such uses, of course, can lessen the credibility of future groups that do have important tasks to accomplish. In any event, we are concerned here only with groups created with the expectation that they will achieve excellent performance. And to design and manage these groups well requires that one be clear about what is to be accomplished.

---

[34] This does not imply that one can always be clear what needs to be done in an organization. It is perfectly reasonable, for example, to ask a group to "Figure out what is going on in area X, and give me your views about it." That then becomes the group task, and the group can be structured and managed in a way that helps it do a good job of researching the question and preparing a report about what it learns.

Question 2: What are the critical task demands? What must the group do to accomplish its task well and on time? Does the task require great effort? Complex knowledge or skills? Careful attention to choices about performance strategy (as in a rapidly changing environment, for example)? The answers to these questions should have a significant bearing on the design of the group and the focus of managerial attention once it is under way.

Question 3: Will the group be manager-led, self-managing, or self-designing? Given the task and its demands, how much authority does the group need? Can that level of authority be provided, given the cultural and political realities of the organization? Are group members willing and able to operate on those terms? Might it make sense to start the group out with limited authority and increase it as members gain experience and skills in self-management? What are the implications of these decisions for the design of the team manager's role (cf., Walton & Schlesinger, 1979)?

Question 4: Overall, how advantageous is it to assign the work to a team? How feasible is it? What are the benefits of having a team perform the task? What are the risks and liabilities? Given that it typically takes more managerial skill to manage a team than to manage individuals working more or less on their own, are the advantages worth the costs?

Will it be possible to design and support the group well? What compromises will have to be made because of an inflexible technology, rigidities in personnel practices, an insufficiency of material resources, or other organizational factors that can get in the way of a good design? Are these compromises so numerous or serious that they will significantly interfere with the group's work?

When the compromises are substantial, or when a manager is unwilling to make the effort to create a good group design, it usually is better to find an alternative way to get the work done than to clutter up the organizational landscape with yet another unnecessary or poorly designed team.

Stage Two: Creating Performance Conditions

The objective in this stage is to make sure that the group has an appropriate design and a supportive organizational context. These structures should make it easy for a group to do well, rather than require it to swim against the current. This may be difficult in organizations that traditionally have used individuals rather than teams as the basic unit for accomplishing work. The two questions posed below, therefore, sometimes will require creation of nontraditional organizational features--or the circumvention of existing structures and systems that are inappropriate for teams.

Question 5: How should the group be composed and the task structured? How can the task be designed to be as clear and as motivationally engaging as possible? What can be done to make the work more challenging and significant? Within the limits of the group's authority, how can task autonomy be increased? What feedback channels can be opened to provide members with regular and reliable knowledge of the results of their work?

How small can the group be and still have the human resources needed for effective performance? How diverse should the membership be? Do members have the interpersonal skills needed for collaborative work?

Question 6: What contextual supports and resources must be provided? What material resources (e.g., tools, equipment, money, or space) will members need in their work? Can these resources be secured? What organizational

supports will help the group in its work? Will the reward, educational, and information systems provide the reinforcement, outside expertise, and data the group will need to perform well? Will the group have contact with people or groups in other parts of the organization (or external to it)? How will they influence the group? Do links with external parties need to be restructured?

Stage Three: Forming and Building the Team

Because long-lasting effects flow from events early in the life of a group, it is worth the trouble to help a work team get started on the right foot. Specific steps must be taken to create a group that can manage its own affairs competently.

Question 7: How can a team be helped to get off to a good start? What can be done, as members confront each other and their task for the first time, to increase the chance they will be able to work well together? Building a competent work team involves helping members (a) develop an appropriate boundary for their group, (b) come to terms with the task they will perform, and (c) begin to develop the norms that will guide behavior in the group.[35]

1. Forming boundaries. If group members are to work interdependently on the task, it must be clear who is a member--and therefore shares responsibility for group outcomes--and who is not. Membership often is unclear in certain kinds of work groups, particularly temporary project and decision-making teams. And when there is ambiguity about group composition, members often become frustrated and performance can suffer. The group must be able to say, at some point, "This is us" and proceed from there. When that

---

[35] There are numerous programs available to guide team-building activities (e.g., Bertcher & Maple, 1977; Dyer, 1977; Merry & Allerhand, 1977; Rubin, Plovnick & Fry, 1977). While 1977 clearly was a very good year for team-builders, these guides (understandably) are based on the experience and conceptual frameworks of their authors; they are not designed to address systematically the three aspects of group life highlighted here.

happens, the composition of the group, begun when members were assigned to the team, will have been completed.

2. Accepting and redefining the task. There may be some people in organizations who believe that the task assigned to a group is the one that the group actually performs. These people have not watched very closely what happens as a group goes to work: often many tasks are being performed, different ones by different members, and none of them the one the manager thought had been assigned. Misunderstandings about the task (whether between the group and the task-giver, or among group members) can result in wasted effort or a product that misses the mark. It is better to identify and deal with such discrepancies when the group starts its work, rather than when the group product is submitted.

Task redefinition is a natural part of the group performance process (Hackman, 1969). By acknowledging that and dealing with questions of task definition early in a group's life, confusion and idiosyncratic interpretations of what is required can be minimized. Consider, for example, tasks that have multiple and conflicting performance objectives (e.g., speed and perfection). The conflict among these objectives can be discussed by the team and its manager, and either resolved or accepted as a tension the group will need to manage. When all parties have come to an agreement about what the task is and what it requires, the process of task design, begun when the work was originally conceived, will have been completed.

3. Developing group norms and member roles. Although each member brings to a group certain assumptions about the kinds of behavior that will be appropriate, such matters are rarely discussed explicitly in the group. Instead, group norms and member roles develop gradually as individuals seek

their own niches, and as the group as a whole struggles to find a comfortable way to operate. The process is a natural one, but the norms and roles that develop may be heavily influenced by forces of which members are unaware (e.g., a shared wish to suppress anxiety-arousing issues). Moreover, the norms that evolve may conflict with core management values about appropriate and expected group behavior.

Groups are likely to function better if they give explicit attention, early in their lives, to the kinds of behaviors that will be valued and the ways work on the group task will be managed. If members are expected to take responsibility for monitoring their performance situation and planning their performance strategies, they should be encouraged to explore the implications of that expectation and their willingness to accept it.

Norms evolve over the life span of any group, and changes in norms and roles are the rule rather than the exception. By providing some assistance to the group early in its life, managers can help get this ongoing process off to a good start, and help members come to grips with both the extent and the limits of their authority. As the group begins to move under its own power, the manager can pull back and the process of designing the group as a performing unit will have been completed.

Stage Four: Providing Ongoing Assistance

Once a group is functioning as a social system, it will control its own destiny to a considerable extent. Nevertheless, managers can assist the group by making it easy for members to renegotiate aspects of the performance situation that turn out to impede performance, by ensuring that members get the ongoing assistance they need to operate well as a team, and by helping the group learn from its experiences.

Question 8: How can opportunities be provided for the group to renegotiate its design and context? Some features of the initial design of a group and its context are sure to be flawed--and some groups simply accept those flaws as an unfortunate fact of organizational life. How can a group be encouraged to take initiatives to get unsatisfactory aspects of its performance situation improved? While it would be inappropriate for a manager to take unilateral action to change a group's design or context (that would undermine its responsibility for managing its own affairs), a manager can provide occasions for explicit review and renegotiation of the performance context. And when such discussions take place, he or she can help members become more skillful, and more comfortable, in taking initiatives to confront aspects of the performance situation (including the manager's own behavior) that are impeding group performance. As a group matures and demonstrates competence in its work, it may be appropriate to empower it even further--e.g., by giving it greater authority for self-management, by arranging access to training activities that can help members improve their skills, and so on.

Question 9: What process assistance can be provided to promote positive group synergy? These activities are closest to traditional "process consultation," discussed earlier in this chapter. But they should emphasize aspects of group life that directly relate to its work on the task. Indeed, it may be that one of the best ways to improve interpersonal relations in the group is to help members perform well on the task--a reversal of the traditional view that task performance depends on the quality of interpersonal relations.

Two aspects of group task behavior warrant special attention. First, efforts can be made to correct group process losses and cultivate synergistic process gains. Is the group suffering from poor coordination, inappropriate weighting of member talents, or flawed implementation of performance strategies? Are there unexploited opportunities to cultivate team spirit, to encourage members to learn from one another, or to develop uniquely-appropriate performance strategies? The considerable literature on process consultation can provide ideas for useful activities and exercises--but some inventiveness by the manager or consultant also surely will be required to tailor what is done to the needs of specific groups.

In addition, the group can be helped to deal with developmental changes and transitions it encounters as it matures as a social unit. Although research and theory useful in guiding such activities in task-performing groups has just started to become available (e.g., Gersick, 1983; Heinen & Jacobson, 1976; Katz, 1982), it is important that a manager be sensitive the developmental issues a group will face as it moves through its life cycle, and that he or she be available to help the group manage them and learn from them.

Question 10: How can the group be helped to learn from its experiences? There are many opportunities for learning in a well-structured and well-managed group. How can these opportunities be exploited? Unfortunately, the press of task work often keeps members from acting on any impulse they may have to reflect together on their experience and learn from it. It is necessary, therefore, to set aside some times for reflection and learning--perhaps at a natural breakpoint in the task work, and certainly when a major phase of the effort has been completed. The manager of the group is in a good position to encourage members to take the time to learn from their experiences, and to assist them in doing so.

Summary

The stages of the action model sketched above are summarized in Figure 9. Clearly, considerable managerial skill and no small measure of hard work are required to do a good job of creating and managing a task-performing team in an organization. If a manager wants a team task to be done well, he or she cannot simply call some people together, toss them a task, and hope for the best.

That is the bad news. The good news is that as managers learn how to design and manage groups well, and as members gain experience and skill in functioning effectively in teams, the plodding, deliberate, step-by-step process outlined above can become second nature, just "the way things are done" in an organization. When that stage is reached, the considerable investment required to learn how to use work teams well can pay substantial dividends--in work effectiveness and in the quality of the experiences of both managers and group members.

Implications for the Management of Teams

Since this chapter represents a departure from traditional thinking about group performance, it may be appropriate to conclude by briefly highlighting some of the broader management implications of what has been proposed.

On leadership. The research literature is rich with studies of leadership in groups (for reviews, see Hare, 1976, Ch. 13, and Stogdill, 1974). Most of this research assesses what leaders do within groups or tests propositions about what leader traits and styles are most effective under what circumstances. Such questions are derivative in the approach taken here, since leaders are viewed as exercising influence primarily through the

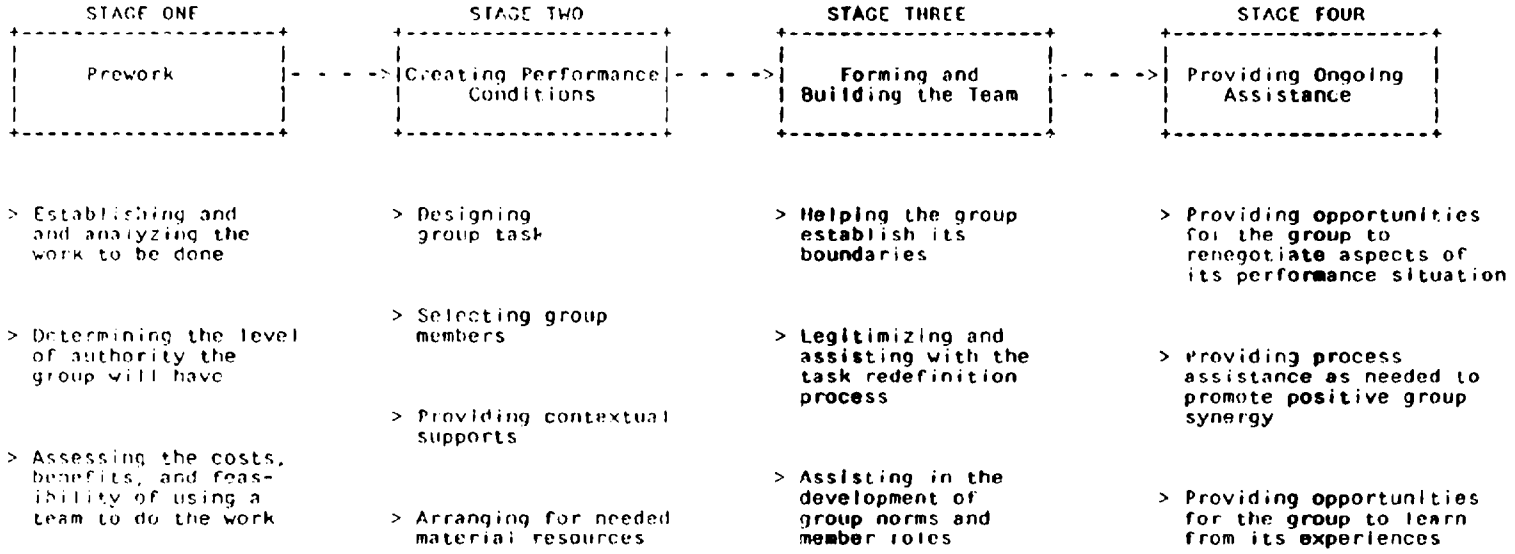


Figure 9. Stages of managerial work in creating an effective group

decisions they make about how to frame the group task, how to structure the group and its context, and how to help the group get started up well and headed in an appropriate direction.

Indeed, we have not even discussed whether an internal group leader should be named--let alone how he or she should behave. It often does make sense to have such a role, especially when substantial coordination among members is required, when there is lots of information to be processed (Maier, 1967), or when it is advisable to have one person be the liaison with other groups or higher management. Yet it is not always a good idea to decide in advance about the leadership structure of a work group. If a group has been designed well and helped to begin exploring the group norms and member roles **it wishes to have, questions of internal leadership should appear naturally.** And while there invariably will be a good deal of stress and strain in the group as leadership issues are dealt with, when a resolution comes it will have the considerable advantage of being the group's own.

The manager's role, then, is to make sure a group confronts the leadership issue directly (even if members would prefer to deal with it implicitly or avoid it entirely), not to resolve it for the group. To do the latter is to short-circuit an important developmental task in the life of a team, and to rob the group of a significant opportunity to organize and develop its own internal resources.

On creating redundant conditions. There are many ways for a group to be effective in performing a task, and even more ways for it to be ineffective. Moreover, different task and organizational circumstances involve vastly different demands and opportunities. Thus it is impossible to specify in detail what specific behaviors managers should exhibit to help groups perform

effectively. There are simply too many ways a group can operate and still wind up with the same outcome.[36] Attempts to specify contingencies for managerial behavior do not help much, in that they usually result in prescriptions too complex for anyone to follow (Hackman, in press).

Thus, while many models of leadership call for the active manipulation of "causes" that are assumed to be tightly linked to "effects," our view of group behavior suggests that the key to effective group management may be to create redundant conditions that support good performance, leaving groups ample room to develop and enact their own ways of operating within those conditions.

A manager interested in encouraging a group to work hard, for example, would try to make the group task more motivationally engaging. And he or she would try to provide more (or more potent) positive consequences contingent on hard, effective work. And he or she would work with the group members to improve the efficiency of their internal processes and to build a positive team spirit. And if there were other steps that could be taken to create conditions supportive of high effort, these would be attempted as well.

Group performance does not have clean, unitary causes. To help a group improve its effectiveness involves doing whatever is possible to create multiple, redundant conditions that together may nudge the group toward more competent task behavior and, eventually, better performance.[37]

---

[36] Systems theorists call this aspect of organized endeavor "equifinality" (Katz & Kahn, 1978, p. 30). According to this principle, a social system can reach the same outcome from a variety of initial conditions and by a variety of methods.

[37] We see here a key difference between descriptive and action models of behavior in organizations. A descriptive model parcels up the world for conceptual clarity; in contrast, a good action model parcels up the world to increase the chances that something can be created or changed. Rather than seeking to isolate unitary causes, an action model attempts to identify clusters of covarying factors that can serve as useful levers for change (see also Hackman, in press; Mohr, 1982; and Weick, 1977).

On managerial authority. The approach taken in this chapter clearly favors the creation of conditions that empower groups, that increase their authority to manage their own work. While this does not imply a diminution of managerial authority, it does suggest that it be redirected.

One critical use of authority, already discussed at some length, is in creating organizational conditions that foster and support effective group behavior. Managers must not view design and contextual features as "givens" over which they have little control. Instead, influence must be wielded upwards and outwards in the organization to make organizational structures and systems as supportive of team effectiveness as possible. If a manager does not have the authority to initiate discussions about making such changes, he or she should consider trying to get it, because it will be hard to be a good team manager without it.

Managerial authority also should be used to establish and enforce standards of group behavior and acceptable performance. When a manager defines a piece of work to be done, sets performance standards, and is clear about the bounds of acceptable group behavior, he or she is exercising managerial authority--and, concurrently, empowering the group that will do the work. To be vague about what is required and expected can be just as debilitating to a group as traditional, hands-on supervision. To enable groups to use their authority well, managers must not be afraid to exercise their own.

On knowing some things. The management behaviors implied by the model of team effectiveness explored in this chapter will seem unfamiliar and awkward to some managers, and may be hard for them to perform well. But any new

endeavor can be difficult. Trying to make sense of a balance sheet, for example, or figuring out a good design for a production process can feel just as awkward and be just as hard for an unpracticed manager to do well. Yet for some reason we are far more willing to acknowledge the need for training and experience in these areas than we are in aspects of managerial work related to the effective use of human resources.

Managing work groups is every bit as tough as figuring out what to do about the numbers on a balance sheet. To manage teams well, one needs to know some things, have some skills, and have opportunities to practice. The sooner those requirements are acknowledged, the sooner we will be able to develop a cadre of managers who are expert in creating work teams, developing them, and harvesting the considerable contributions they have to make to organizational effectiveness.

References

Alderfer, C. P. Group and intergroup relations. In J. R. Hackman & J. L. Suttle (Eds.), Improving life at work. Santa Monica, CA: Goodyear, 1977.

Argyris, C. The incompleteness of social psychological theory: Examples from small group, cognitive consistency, and attribution research. American Psychologist, 1969, 24, 893-908.

Argyris, C. The inner contradictions of rigorous research. New York: Academic Press, 1980.

Argyris, C. Action science and intervention. Journal of Applied Behavioral Science, 1983, 19, 115-135.

Bales, R. F. Interaction process analysis: A method for the study of small groups. Cambridge, MA: Addison-Wesley, 1950.

Bales, R. F. Personality and interpersonal behavior. New York: Holt, Rinehart & Winston, 1970.

Bales, R. F. & Cohen, S. P. SYMLOG: A system for the multiple level observation of groups. New York: Free Press, 1979.

Beer, M. The technology of organization development. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand-McNally, 1976.

Belbin, R. M. Management teams: Why they succeed or fail. London: Heinemann, 1981.

Bertcher, H. J. & Maple, F. F. Creating groups. Beverly Hills, CA: Sage, 1977.

Blake, R. R. & Mouton, J. S. Building a dynamic corporation through grid organization development. Reading, MA: Addison-Wesley, 1969.

Colman, A. D. & Bexton, W. H. Group relations reader. Sausalito, CA: GREX, 1975.

Cooper, C. L. (Ed.), Theories of group processes. London: Wiley, 1975.

Cummings, T. G. Self-regulating work groups: A socio-technical synthesis. Academy of Management Review, 1978, 3, 625-634.

Cummings, T. G. Designing effective work groups. In P. C. Nystrom & W. H. Starbuck (Eds.), Handbook of organizational design (Vol. 2). London: Oxford Univ. Press, 1981.

Dalkey, N. C. Delphi. Santa Monica, CA: Rand Corporation, 1967.

Davis, J. H. Group decision and social interaction: A theory of social decision schemes. Psychological Review, 1973, 80, 97-125.

Davis, J. H. & Hinsz, V. B. Current research problems in group performance and group dynamics. In H. Brandstätter, J. H. Davis & G. Stocker-Kreichgauer (Eds.), Group decision making. London: Academic Press, 1982.

Delbecq, A. L., Van de Ven, A. H. & Gustafson, D. H. Group techniques for program planning. Glenview, IL: Scott, Foresman, 1975.

Dunnette, M. D., Campbell, J. & Jaastad, K. The effect of group participation on brainstorming effectiveness for two industrial samples. Journal of Applied Psychology, 1963, 47, 30-37.

Dyer, W. G. Team building: Issues and alternatives, Reading, MA: Addison-Wesley, 1977.

Friedlander, F. & Brown, L. D. Organization development. In M. R. Rosenzweig & L. W. Porter (Eds.), Annual review of psychology (Vol. 25). Palo Alto, CA: Annual Reviews, 1974.

Gersick, C. J. G. Life cycles of ad hoc groups. T. R. No. 3, Group Effectiveness Research Project, School of Organization and Management, Yale University, 1983.

Glaser, R. & Klaus, D. J. A reinforcement analysis of group performance. Psychological Monographs, 1966, 80 (Whole No. 621), 1-23.

Goodman, P., Atkin, R. & Havlin, E. Some observations on specifying models of group performance. Paper delivered at a symposium on Productive Work Teams and Groups, American Psychological Association Convention, Washington, D. C., 1982.

Green, T. B. An empirical analysis of nominal and interacting groups. Academy of Management Journal, 1975, 18, 63-73.

Hackman, J. R. Toward understanding the role of tasks in behavioral research. Acta Psychologica, 1969, 31 97-128.

Hackman, J. R. Group influences on individuals. In M. D. Dunnette (Ed.), Handbook of industrial and organizational psychology. Chicago: Rand-McNally, 1976.

Hackman, J. R. A set of methods for research on work teams. Technical Report No. 1. Group Effectiveness Research Project, School of Organization and Management, Yale University, 1982.

Hackman, J. R. A normative model of work team effectiveness. Technical Report No. 2. Group Effectiveness Research Project, School of Organization and Management, Yale University, 1983.

Hackman, J. R. Psychological contributions to organizational productivity: A commentary. In A. P. Brief (Ed.), Research on productivity. New York: Praeger, in press.

Hackman, J. R., Brousseau, K. R. & Weiss, J. A. The interaction of task design and group performance strategies in determining group effectiveness. Organizational Behavior and Human Performance, 1976, 16, 350-365.

Hackman, J. R. & Morris, C. G. Group tasks, group interaction process, and group performance effectiveness: A review and proposed integration. In L. Berkowitz (Ed.), Advances in experimental social psychology. New York: Academic Press, 1975.

Hackman, J. R. & Oldham, G. R. Work redesign. Reading, MA: Addison-Wesley, 1980.

Hare, A. P. Handbook of small group research (2nd ed.). New York: Free Press, 1976.

Hare, A. P. Creativity in small groups. Beverly Hills, CA: Sage, 1982.

Heinen, J. S. & Jacobson, E. A model of task group development in complex organizations and a strategy of implementation. Academy of Management Review, 1976, 1, 98-111.

Herold, D. M. Improving the performance effectiveness of groups through a task-contingent selection of intervention strategies. Academy of Management Review, 1978, 3, 315-325.

Hewett, T. T., O'Brien, G. E. & Hornik, J. The effects of work organization, leadership style, and member compatibility upon the productivity of small groups working on a manipulative task. Organizational Behavior and Human Performance, 1974, 11, 283-301.

Hoffman, L. R. Applying experimental research on group problem solving to organizations. Journal of Applied Behavioral Science, 1979, 15, 375-391. (a)

Hoffman, L. R. (Ed.), The group problem solving process: Studies of a valence model. New York: Praeger, 1979. (b)

Jackson, J. Structural characteristics of norms. In I. D. Steiner & M. Fishbein (Eds.), Current studies in social psychology. New York: Holt, 1965.

Janis, I. L. Groupthink (2nd ed.). Boston: Houghton Mifflin, 1982.

Johnson, H. H. & Torcivia, J. M. Group and individual performance on a single-stage task as a function of distribution of individual performance. Journal of Personality and Social Psychology, 1967, 3, 266-273.

Kaplan, R. E. The conspicuous absence of evidence that process consultation enhances task performance. Journal of Applied Behavioral Science, 1979, 15, 346-360.

Katz, D. & Kahn, R. L. The social psychology of organizations (2nd ed.). New York: Wiley, 1978.

Katz, R. The effects of group longevity on project communication and performance. Administrative Science Quarterly, 1982, 27, 81-104.

Latané, B., Williams, K. & Harkins, S. Many hands make light the work: The causes and consequences of social loafing. Journal of Personality and Social Psychology, 1979, 37, 822-832.

Lawler, E. E. Pay and organization development. Reading, MA: Addison-Wesley, 1981.

Leavitt, H. J. Suppose we took groups seriously... In L. L. Cass & F. G. Zimmer (Eds.), Man and work in society. New York: Van Nostrand Reinhold, 1975.

Maier, N. R. F. Problem solving discussions and conferences: Leadership methods and skills. New York: McGraw-Hill, 1963.

Maier, N. R. F. Assets and liabilities in group problem solving: The need for an integrative function. Psychological Review, 1967, 74, 239-249.

March, J. G. & Simon, H. A. Organizations. New York: Wiley, 1958.

McGrath, J. E. Social psychology: A brief introduction. New York: Holt, 1964.

McGrath, J. E. The study of groups: Group task performance and social interaction. Englewood Cliffs, NJ: Prentice-Hall, 1983.

McGrath, J. E. & Altman, I. Small group research: A synthesis and critique of the field. New York: Holt, 1966.

McGrath, J. E. & Kravitz, D. A. Group research. Annual Review of Psychology, 1982, 33, 195-230.

Merry, U. & Allerhand, M. E. Developing teams and organizations. Reading, MA: Addison-Wesley, 1977.

Mohr, L. B. Explaining organizational behavior. San Francisco: Jossey-Bass, 1982.

Myers, D. C. & Lamm, H. The group polarization phenomenon. Psychological Bulletin, 1976, 83, 602-627.

Nagao, D. H., Vollrath, D. A. & Davis, J. H. Group decision making: Origins and current status. In H. Brandstätter, J. H. Davis and H. C. Schuler (Eds.), Dynamics of group decisions. Beverly Hills, CA: Sage, 1978.

Osborn, A. F. Applied imagination (Rev. ed.). New York: Scribner's, 1957.

Payne, R. & Cooper, C. L. (Eds.), Groups at work. Chichester, U.K.: Wiley, 1981.

Peters, L. H. & O'Connor, E. J. Situational constraints and work outcomes: The influences of a frequently overlooked construct. Academy of Management Review, 1980, 5, 391-397.

Peters, L. H., O'Connor, E. J. & Rudolf, C. J. The behavioral and affective consequences of performance-relevant situational variables. Organizational Behavior and Human Performance, 1980, 25, 79-96.

Poza, E. J. & Marcus, M. L. Success story: The team approach to work restructuring. Organizational Dynamics, Winter 1980, 3-25.

Roby, T. B. & Lanzetta, J. T. Considerations in the analysis of group tasks. Psychological Bulletin, 1958, 55, 88-101.

Rubin, I. M., Plovnick, M. S. & Fry, R. E. Task-oriented team development. New York: McGraw-Hill, 1977.

Runkel, P. J. & McGrath, J. E. Research on human behavior. New York: Holt, 1972.

Schein, E. H. Process consultation. Reading, MA: Addison-Wesley, 1969.

Schutz, W. C. FIRO: A three-dimensional theory of interpersonal behavior. New York: Holt, 1958.

Schutz, W. C. On group composition. Journal of Abnormal and Social Psychology, 1961, 62, 275-281.

Stasser, G. & Davis, J. H. Group decision making and social influence: A social interaction sequence model. Psychological Review, 1981, 88, 523-551.

Stein, M. I. Stimulating creativity (Vol. 2). New York: Academic Press, 1975.

Steiner, I. D. Group process and productivity. New York: Academic Press, 1972.

Stogdill, R. M. Handbook of leadership. New York: Free Press, 1974.

Stumpf, S. A., Zand, D. E. & Freedman, R. D. Designing groups for judgmental decisions. Academy of Management Review, 1979, 4, 589-600.

Thomas, E. J. & Fink, C. F. Models of group problem solving. Journal of Abnormal and Social Psychology, 1961, 63, 53-63.

Thomas, E. J. & Fink, C. F. Effects of group size. Psychological Bulletin, 1963, 60, 371-384.

Torrance, E. P. Some consequences of power differences on decision making in permanent and temporary three-man groups. Research Studies, State College of Washington, 1954, 22, 130-140.

Trist, E. L. The evolution of sociotechnical systems as a conceptual framework and as an action research program. In A. H. Van de Ven & W. F. Joyce (Eds.), Perspectives on organization design and behavior. New York: Wiley, 1981.

Tuckman, B. W. Developmental sequence in small groups. Psychological Bulletin, 1965, 63, 384-399.

Vidmar, N. & Hackman, J. R. Interlaboratory generalizability of small group research: An experimental study. Journal of Social Psychology, 1971, 83, 129-139.

Wall, T. D. & Clegg, C. W. A longitudinal field study of group work design. Journal of Occupational Behavior, 1981, 2, 31-49.

Walton, R. E. & Schlesinger, L. S. Do supervisors thrive in participative work systems? Organizational Dynamics, Winter 1979, 24-38.

Weick, K. E. Laboratory experimentation with organizations. In J. G. March (Ed.), Handbook of organizations. Chicago: Rand-McNally, 1965.

Weick, K. E. Organization design: Organizations as self-designing systems. Organizational Dynamics, Autumn 1977, 31-46.

Whyte, W. F. Money and motivation: An analysis of incentives in industry. New York: Harper, 1955.

Wicker, A., Kirmeyer, S. L., Hanson, L. & Alexander, D. Effects of manning levels on subjective experiences, performance, and verbal interaction in groups. Organizational Behavior and Human Performance, 1976, 17, 251-274.

Woodman, R. W. & Sherwood, J. J. The role of team development in organizational effectiveness: A critical review. Psychological Bulletin, 1980, 88, 166-186.

Zander, A. Motives and goals in groups. New York: Academic Press, 1971.

Zander, A. The origins and consequences of group goals. In L. Festinger (Ed.), Retrospections on social psychology. New York: Oxford Univ. Press, 1980.

APPENDIX

The Domain of the Group Effectiveness Model

The model of group effectiveness discussed in this report applies only to groups that (a) are intact social systems, (b) have one or more tasks to perform, and (c) operate within an organizational context. As noted in the body of the report, it often is difficult to determine exactly what is a "real" group, a "group task," and an "organizational context." In this appendix, we examine each of these concepts in more detail, in hopes of being as clear as possible about the domain of groups to which the model is intended to apply.

The Group Is A Real Group

A group falls within our domain if it meets the following three criteria, adapted from Alderfer (1977):

(1) It is perceived as a group both by members (who should be able to distinguish reliably people who are members from those who are not) and non-members (who should be able to identify and characterize the group in relatively specific terms).

(2) Members have significantly interdependent relations with one another. While this does not necessarily imply that they have regular face-to-face interaction, it does require that they be dependent on one another to achieve some shared outcome.

(3) Member have differentiated roles within the group. There is agreement among members that different individuals are expected to behave in different ways as the group goes about its business.

If these criteria are not met, we would consider the "group" to be a loose aggregation of individuals rather than an intact social system, and exclude it from consideration here.[1]

---

[1] Note that nothing is said about minimum or maximum number of members or about the permanence of the group. Only if one of the above three criteria is not met for a very large (or small) group would it leave our domain. Similarly, even a very short-lived group (e.g., a committee created to make a quick decision that disbands immediately thereafter) would be included--again, so long as the three criteria are met.

The Group Has A Task To Perform

The model applies only to groups that generate some potentially measurable group output in response to a defined group task. The performing unit must be the group, not individual members. We exclude all cases in which someone assigns tasks to individuals and holds them personally accountable for the products--even if the individuals work in a group setting, and even if the task-giver subsequently aggregates the individuals' output into a "group" product.[2]

Tasks can be given to a group orally, in written form, or even implicitly (e.g., a manager saying "Well, don't you people think you should do something about the broken machine?"). But it must be clear what the task is (or else it would be impossible to trace its impact on the group).[3] The model is not intended to apply to tasks that are so vague and unclear as to be literally indescribable.

Finally, only tasks requiring that some group-level output be generated are included. The output can be a written or physical product, a service, a decision, or even documentation that all required activities have been satisfactorily completed. But there must be some outcome whose acceptability (e.g., to the clients of the group's work, or to managers charged with reviewing the group's performance) is potentially measurable.

---

[2] Groups do, of course, sometimes decide to divide up the work among members and assemble the pieces later. In such cases it continues to be the group, not individual members, who are responsible for the overall product--and the group would remain in our domain.

[3] For further discussion about the attributes of tasks and ways of measuring them, see Hackman (1969, 1982).

The Group Operates In An Organizational Context

The organizational context of a group is one of the most important factors in affecting group behavior and performance. A model of group performance that did not address group-context relationships would be a model of little use in understanding work teams as they exist in organizations. For this reason, our domain must be restricted to groups that have organizational contexts. Specifically, groups addressed by the model (a) have interdependent relations with other groups and/or their representatives within a larger social system, and (b) are subject to influence by organizational structures and systems that have been put into place with the intent of guiding or controlling the behavior of organization members (e.g., reward systems, control systems, and so on).[4]

[4] In assessing contextual influences on a work group we must also note those that come from extra-organizational sources. In some cases, outside influences are as strong or stronger than those arising from within the organization (e.g., powerful reinforcements from clients in an organization that itself does not provide performance-contingent rewards).

END

DATE

FILMED

1-84

DTIC