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Published In
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New Forms of Work Groups: Exocentric Teams

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This chapter is about the changing nature of work groups and the implications of these changes for workplace practices, management of change at the workplace, and for future research about groups. Specifically, we examine the following questions:

- What are the basic changes in the structure and process of forms of work groups?
- What are the implications of these changes for practice and research on groups in organizations?

The theme of this chapter is that fundamental changes in the nature of work groups require new theoretical and methodological approaches to the study of groups and new ways of managing groups, both by group leaders and by those who design and oversee them. Since these new forms of groups span new boundaries (geographic, organizational, functional, and temporal), they present new challenges for negotiation and conflict resolution. We will therefore highlight a number of these challenges the changing nature of groups pose to both their leaders and members.

**Assumptions about Groups**

Our theory and research about groups are based on the basic images of what a group looks like and what it does. We often think of a group as a set of people who come together to work in the same place and at the same time. We also think of a group as a set of people who work together over a period of time. These features --working in the same place, same time, and over a period of time--are what we call assumptions about groups. These assumptions have served as the basis of group research over the last 30 years. Surfacing and delineating assumptions, particularly as new forms of groups emerge, are key to the development of theory, methods, and practice. Take a work group that exists
over time, for example, and another that disbands after solving a problem in a short time span, say, one day. These are two very different scenarios and require a different focus and approach for both researchers and practitioners. Although the general definition of the group may be the same in the two cases, the role of leadership and the measures used to judge effectiveness will be different for a group with a very short time horizon, as opposed to one with a long time horizon. Greenhalgh and Lewicki note similar issues for negotiations in short and long term groups. For example, members of long term groups will need to worry more about the quality of their interpersonal relationships and the carryover effects of their day to day interactions.

There has been a substantial change in the nature of groups at work, and many of the assumptions we have about traditional work groups do not apply to these emerging forms. Before we delineate some of the key features and assumptions about this new form of work group, let us briefly present an historical perspective of our assumptions about groups and the roles they have traditionally played in organizations.

**Historical Perspectives**

Prior research in the social psychology of groups has had a major impact on how we think about groups today. Specifically, work by Steiner (1972) and McGrath (1984) and others has shaped both our approaches to the study of groups and organizations and our understanding of such concepts as size, composition, leadership, and cohesiveness of groups.

We have assumed that people come to the same place at the same time to work on a group task and that the processes among group members lead to certain levels of group
output. The composition of the group (size and homogeneity) and the type of group task impact on the group processes. The fact that most of the early work on groups was done in a laboratory setting further sharpened these assumptions. The laboratory setting, probably as much as the theory, focused attention on the relationship among antecedents (such as size), internal processes, and outputs. There was little attention to the environment or external processes. Similarly, there was an underlying assumption in this research that we could specify clear performance requirements or the outputs or outcomes of a group and link a set of these internal processes to those outcomes.

In the 1980s, the growing use of teams in organizations posed challenges to the prevailing models of group behavior and spawned a major new interest in group research in organizational settings (Sanna and Parks 1997). One dominant stream of this research focused on changing levels of participation, autonomy, and control in groups. The assumptions were that these structural changes (self-designing teams) impacted processes such as problem solving and coordination, and, in turn, these processes contributed to enhancing group output. Although the themes of this research differed from those in the earlier social-psychology literature, many of the descriptive assumptions were the same. People still came together in the same space and at the same time to produce a product. The underlying assumptions concerning the ability to specify group output and to link antecedents and processes to that output remained the same.

There is also a growing body of research that has focused on topics such as group composition (size, tenure, and diversity), intra-organizational contextual variables (rewards and supervision), and internal group factors (cohesiveness, motivation, and cognition) (Cohen and Bailey 1997; Guzzo and Dickson 1996). These studies have
emphasized the importance of objective measures of performance and have defined group effectiveness in terms of outputs, consequences for members (attitudinal and behavioral), and enhancement of team capabilities.

The vast majority of research that has been reported involved groups within a single organization, with stable, full-time members. Although the researchers attempted to cover interesting and unique forms of groups, most of these groups still conformed to traditional assumptions. The research on flight crews, for instance, covered groups with changing membership, but members who all worked for the same organization, interacting in the same time and place, with very clear and measurable outcomes. Even research on computer-assisted groups has involved groups that were co-located and simply used a Group Decision Support System to augment their group decision-making process (Guzzo and Dickson 1996).

Recent literature reviews acknowledged that “external processes are all but ignored” in the bulk of group research (Cohen and Bailey 1997). There are a few examples of work that has explicitly tried to redirect our assumptions, however. Ancona’s work (1990; Ancona and Caldwell 1992), for example, has focused our attention on communications processes external to the group, rather than the more typical emphasis on internal group processes. More recent models of group process have also tried to go beyond the traditional, internal focus and highlight the embedding processes of groups. Argote and McGrath (1993), for instance, include external relations as one of four major processes involved in group work (along with construction, operations, and reconstruction).
Analysis

With this brief review as a context for our discussion, we now turn to the differences between traditional and emerging forms of teams. The basic focus of our analysis is on the different assumptions and their implications for theorizing about and managing groups.

Traditional Teams

Most theory and empirical research on groups in organizations has been focused on traditional teams. Table 1 lists some of the key assumptions inherent in traditional teams. The table is divided into three categories—effectiveness, membership, and structure. Traditional teams tend to have operational, internally defined effectiveness measures (e.g., revise the list of frequently asked questions for an updated version of a piece of software) and are made up of a stable set of co-located members of one or more work units. While there are other dimensions in the group literature, these categories seem to provide a reasonable way to describe groups and present our analysis. The following examples highlight how these dimensions play out in several different types of traditional teams:

Example 1a: mining crew 2-North. This underground coal-mining crew is composed of regular union miners and a supervisor; it has one of the best productivity and safety records in the mine. Together, mine and corporate managements define what acceptable performance is, with the output measured in terms of tons per hour. The crew works eight-hour shifts in the 2-North section of the mine. A high degree of internal
interdependence exists among the crew members: failure of any one job sharply reduces the total output of the crew. The average length of service in this crew is approximately two and a half years.

Example 1b: shared service center team. This is a group of accountants and clerks who handle all the expense reports for one segment of a large sales organization. The group has been so productive that the company has been able to sell its report-processing capabilities to other parts of the organization. The group’s effectiveness is measured in terms of errors (those reported by internal users, plus those detected during a semi-annual audit), costs per transaction, and customer satisfaction (as measured in an annual survey of a sample of users). The team is interdependent in two ways: multiple members are involved in the serial processing of tasks, and the team is responsible for scheduling its own work, planning its own training, and providing performance feedback to one another.. By most measures—productivity, accuracy, and customer satisfaction—this is a very successful team.

What are the underlying assumptions of these two groups? The first is that they produce an identifiable output, which is certified by the organization. While the final product needs to meet the approval of the customer (sales representatives, for example), in both cases, the definition of acceptable levels of output is determined internally. The second assumption is that one can specify the production function for these groups. Specifying the production function means you know how group inputs will affect outputs.. For example, the quality of the mining equipment, the nature of the physical conditions, and the familiarity of team members with their jobs and with each other will
affect the level of output for the group. In terms of membership, in each case team members were part of the same organizations, worked full time in the team, and expected to work together over time. In terms of work, members of both groups operated in temporal and spatial proximity, and their work was defined primarily by its internal independence.

We have presented a unitary view of traditional teams in order to anchor the concept. Clearly, there may be variations along these dimensions. Members may not spend 100 percent of their time in the group, for example, and there may be forms of internal and external interdependencies. The dimensions presented in Table 1 provide a means for conceptualizing the distinctions between traditional and exocentric teams.

Exocentric Teams

A new form of group has emerged over the past five to ten years. We have labeled this form exocentric, referring to the group’s focus on external activities and relationships. Key assumptions inherent in exocentric groups are listed in Table 1. They tend to be made up of individuals located in different places, representing different organizations, or not always available to participate in person in team meetings. Their effectiveness may often be harder to judge because their goals may be more diffuse or varied, depending on what each of the organizations supplying members want to get out of the group interactions. Members are more likely to come and go as priorities and job assignments in their respective organizations change. The development of these exocentric groups has been driven by many forces. First, the globalization of work has placed people in distributed environments, while the development of information
technology created new opportunities for bridging space and time. Currently over 11 million teleworkers are active in the United States alone (www.gilgordon.com 1997), and that number is expected to grow rapidly (Kraut 1994). Second, there is a greater priority for building effective customer-supplier relationships (Fichman and Goodman 1996), a fact that has led to new teams bridging space and time boundaries. Joint ventures and strategic alliances (with groups cutting across organizational boundaries) are increasing, in fact, by as much as 25 percent per year (Crandall and Wallace 1997). Third, the drive for improving performance in the light of growing global competitiveness has contributed to innovations in group structure and process, such as virtual arrangements.

Collaborative work in virtual arrangements is predicted to be the number one trend in the workplace over the next ten years (Kemske 1998). It’s not surprising, then, that recent surveys have shown that among companies that currently use teams, 82 percent expect to expand their use of virtual teams (DDI 1997).

The concept of exocentric teams can be clarified by examining examples of different types of teams that fit under this heading. We examine three, each one selected to illustrate one of the three dimensions that characterize exocentric teams.

Example 2a: computer emergency response teams (CER Teams). These groups have only recently come into being, to match the explosion of the Internet. The goal of CER Teams is to prevent or minimize attacks on the Internet, such as when someone illegally obtains or modifies information from another user, either for economic gain (industrial espionage) or for other malevolent reasons. An intruder in one case switched names in medical records that were connected to diagnoses for cancer.
The major role of the CER Team is to identify when an attack is occurring and to advise users what to do. A major product of the CER Team is an advisory, which may be sent to hundreds of thousands of people, telling users how to prevent, or minimize the effects of, an attack. Each attack leads to the creation of a new team, since attacks are totally unpredictable.

Since issuing advisories is dependent on when an attack occurs, members may not always be on a CER Team at any given time. Thus, at other times, they perform other duties. While CER Team members often work in the same physical setting, much of their work is externally focused. Working on an advisory may include members from other CER Teams, vendors, and service providers, for example.

Example 2b: Customer-Supplier team. This team’s goal is to minimize stock shortages by coordinating activities in an important supplier and customer relationship. In this example, the supplier is a large consumer-products company (called G&P here) and the customer is a major retail organization (referred to here as WellMart). The constituencies for this team are both organizations.

Members work together in the same space and time, although they come from the two different organizations with different cultures, rewards, and procedures. Their challenge is to manage external relationships, including the factories, their production scheduling, and distribution priorities of G&P, as well as the stores, warehouses, and distribution and purchasing priorities of WellMart. Membership in the team is a full-time responsibility for about half of its members. The peripheral members spend an average of 20 percent of their time on team activities. Internal relationships exist in this team, but they are not the primary focus of attention. The core members return to their parent
organizations after a one-year assignment. Thus, their loyalties and home-organization peers and bosses are the primary constituents and concerns of these team members.

**Example 2c: Software development teams.** These teams build software systems for the customers of a large, global software company. While the goals are to provide on-time delivery of a software system that provides value for the customer, the constituencies for this team are primarily internal to the company. In terms of membership, the team comes from the same organization, the work typically requires 100 percent of the team members’ time, and the team remains together until the product is completed. In most cases, this is around 18 months.

The principal difference is that these team members are widely distributed geographically—in the United States, Southeast Asia, India, and the United Kingdom. Hence, their work is in different locations in different time zones. This is a 24-hour-a-day operation, in which the work gets passed off to a different time zone as each segment of the team completes its shift.

**What We Know About Exocentric Work Groups**

There is not meant to be one stereotypic exocentric group, and the three we have selected highlight different dimensions of exocentric groups. The emerging literature on this topic has focused mainly on the dimension of group work distributed in space and time. This literature has highlighted some of the major differences in groups working in a distributed environment versus a proximate (or co-located) environment. One critical issue in distributed groups is providing a sense of cohesion and shared identity. Team members who are co-located can easily initiate spontaneous casual interactions, but these
are less probable in distributed groups (Tang, Isaacs, and Rua 1994). Limited interaction leads to a lack of peripheral awareness of fellow team members (Benford, Brown, Reynard, and Greenlaugh 1996), which in turn leads to conflicts and misunderstandings (Cramton 1997).

There is also evidence that when some group members are co-located and some are not, more coordination takes place among the co-located subgroup (Bellotti and Bly 1996). Responsibility and commitment may decline among members who do not meet face to face (Olson and Teasley 1996). These phenomena may contribute to in-group – out-group dynamics that make cohesion and trust more problematic in distributed groups (Kraut 1994).

The dimensions of space and time are only one way to characterize exocentric groups. There are some others. In exocentric groups there may not be a product, as there is in traditional groups. In the WellMart/G&P case, for example, the major goal is minimizing stock outages. This is a measure of coordinating activities, not a direct product. As such it is hard to measure the contribution of doing the job well. Compare this to the mining example, in which coal is sold to a power company to create energy. The output here can be measured easily in both tons and revenue generated. The criteria for the team's effectiveness in the other exocentric group examples are often very diffuse. It is very difficult to assess the value of an advisory in the CER Team case, for several reasons. First, the advisory goes out to hundreds of thousands of people, most unknown to the team. Second, there is rarely any feedback. Third, it is hard to assess the impact of an advisory. Consider the following. You receive an advisory but do not implement the suggested activities, and you are not attacked. Was the advisory effective?
The role of constituencies may also differ. In the CER Team, members are focused primarily on external constituencies. In the WellMart-G&P case, the primary constituencies for the team are the two organizations. In the shared service team, the primary focus is on internal constituencies.

Membership in exocentric groups may be composed of people in different organizations, and members may not allocate 100 percent of their time to the team. In WellMart-G&P and CER Teams, members work on other activities as well as the group’s. In all three cases, membership is reconstituted periodically. For CER Teams, the team lasts as long as it takes to generate an advisory, perhaps 2-3 days. For the next incident, a new team is formed. For the MST example, on the other hand, the team disbands in 12 to 18 months, when the software is completed.

**Exocentric Groups and Models of Group Effectiveness**

The basic thesis of this chapter is that current models of group effectiveness may not be applicable to new forms of work groups, because the basic assumptions that are inherent in most current models of group effectiveness are violated in exocentric teams. Let us approach this argument by exploring some current or traditional models of group effectiveness, their assumptions, and their limitations with respect to exocentric teams.

**Current Models of Group Effectiveness**

A brief picture of some models of group effectiveness is presented in Figure 1 (Hackman 1983; Ancona 1990; Cohen and Bailey 1997). Our focus is meant to be illustrative, not comprehensive or evaluative. A cursory examination indicates a common
set of antecedent variables (group composition and organizational context), processes (such as task and maintenance), and criteria (like performance, satisfaction, and adaptation). All these models are presented at a very general heuristic level, without specification as to functional form or the manner in which context or tasks might change the relative importance of variables in the models (Goodman, Ravlin, and Argote 1986).

Some of the usual assumptions either implicit or explicit in these models are:

- One can specify and operationalize the group performance or other outcomes.
- One can specify a model linking external contextual features and internal processes with group outcomes.
- Group members come from the same organization.
- The group exists over a period of time.
- The group exists in temporal and spatial proximity.
- The group is defined primarily by its internal interdependence.

Now it could be argued that these assumptions are either too restrictive or are not incorporated in these models. They are explicit or implicit in the current traditional models of group effectiveness, however, in the following ways: First, most models specify outcomes, such as productivity, member satisfaction, and turnover, which have been measured in many studies (Guzzo and Dickson 1996) and used by managers in judging the success of teams or groups. While these traditional measures may still apply to some exocentric groups, their members’ goals are more likely to vary given the different time horizons, motivations to participate, and organizational objectives involved. Second, although the models are somewhat general, they come with clear theoretical arguments and empirical evidence that antecedents, such as group
composition, affect group performance, given certain task conditions. Implicit in this assumption is the notion that designers can change these features to change group outcomes.

Third, the assumption that members come from the same organization is derived from two sources. The use of organizational context in most models refers to the organization within which the group works, and most of the empirical research is on groups within the same organization. Fourth, in many of the models (see Hackman 1983, for example), the capability of a group to exist and adapt over time is another measure of effectiveness. This makes a good deal of sense if you are interested in stable groups, such as mining or service center teams. Adaptation over time is less relevant if the group goes out of business in two days. Fifth, from early work on the social psychology of groups to current-day group research, the focus has been on groups in which members are spatially and temporally proximate, in the same organization. Theoretical work on group composition or socialization, and the group development or socialization processes these models encourage (Moreland and Levine 2000), implicitly focuses on face-to-face groups. Emphasis is given to communication, conflict resolution, and other internal processes that are critical to successful face-to-face interactions.

Lastly, in the current models, there is still a strong focus on internal processes as the drivers of group outcomes. Clearly, work by Ancona (1992) and others indicated that external processes are important. However, in traditional groups, internal processes have been dominant drivers of group outcomes, with some consideration given to external processes. In exocentric teams, though, internal processes are not the key drivers.
Are current models applicable to exocentric groups?

These assumptions have guided our research on groups, explicitly or implicitly, over the years. As new forms of groups emerge, the question is whether these assumptions are still applicable in the models of effectiveness. We argue that for exocentric teams there may be different assumptions:

- It may not be possible to specify a clear measure of effectiveness.
- The links among external factors, internal group process characteristics, and effectiveness may be difficult to specify.
- Group members may come from multiple organizations, rather than a single organization.
- The group may be reconfigured continually over time.
- Group members may be separated in space and time.
- External interdependence is key for group survival and success.

The next question is, if the traditional assumptions are violated, what are the implications of that violation for understanding and assessing new forms of groups? We believe those implications are best examined by looking at the performance criterion problem and the selection of predictors.

The performance criterion problem. The CER Team example is a good case through which (1) to illustrate why specifying a performance outcome is difficult and (2) to explore some interesting implications for both research and practice. Remember, the main job of the CER Team is to identify and warn people about attacks on the Internet. The advisories for minimizing attacks and their consequences are one of the major
deliverables. The problem in identifying and measuring the effectiveness of the group, though, is inherent in its structure. The advisories can go to hundreds of thousands of people. Since there are no reciprocal interactions between the team and the people receiving an advisory, though, as there are between a supplier and a customer, there may be little or no feedback on the advisory.

Let’s assume we can look in on a person receiving an advisory. The person implements the advisory and is not attacked. Or the person does not implement the advisory and is not attacked. Or the person does not implement the advisory immediately, subsequently introducing elements of several advisories and other expert opinions during a system reconfiguration. The question is whether the advisory was effective. The time between receiving the advisory, acting, and consequences is unclear. It is difficult to causally link the advisory to reductions in negative consequences and thus reductions in negative consequences cannot be used as a criterion for effectiveness.

The basic point is that in certain types of exocentric teams the performance assessment problem is intractable because of the structure of the group and its task. Some standard options are open to researchers and practitioners when the criterion is difficult to specify. First, one can go back to other criteria, such as group satisfaction or morale. The main problem with this approach is that it begs the question because satisfaction is conceptually different from performance. Another problem is that some exocentric teams have a very short life. While one clearly can measure satisfaction at any time interval, conceptualizing satisfaction in both permanent and non-permanent groups seems a very different task. To sharpen this point about time intervals and criteria, consider the criterion of group turnover rates as a means of assessing satisfaction. This is a concept
that clearly makes sense in permanent groups, but is difficult to use as an effectiveness indicator in a group that might exist for only a few days.

Another standard option when there is a performance criterion problem is to move back to interim criteria. We could look at how long it took to release an advisory in the CER Team case, for example. The challenge in using interim criteria is to be able to link these criteria, either theoretically or empirically, to the ultimate performance goals of the group. What is the work the group must get done for the organization to function well? This question is not easily answered here, however. It is not obvious that the time taken to release an advisory is positively or negatively related to the effectiveness of a CER Team.

The selection of predictor problem. Let’s assume one can specify criteria for group effectiveness. Another question concerns how predictors from current group research help our understanding or management of exocentric teams.

The models in Figure 1 provide a set of predictors. Recent reviews (Cohen and Bailey 1997; Guzzo and Dickson 1996) present compilations of findings on factors that affect group effectiveness, including such factors as familiarity, group mood, and leadership. The question is whether these findings generalize to exocentric groups.

Familiarity. To sharpen this analysis, we start with our own work on familiarity and show that it is rooted in traditional group assumptions and does not easily generalize to exocentric teams.
Familiarity refers to the level of knowledge team members have about their own job, the team members they work with, and the environment or context in which the group works. The basic argument is that familiarity enhances group performance in interdependent groups. The knowledge coworkers have of each other’s work styles and habits facilitates work when the conditions are characterized by interdependence and uncertainty. Decreases in familiarity via absenteeism or turnover have been seen to reduce performance (Goodman and Garber 1988; Goodman and Leyden 1991).

The issue is whether familiarity helps us understand exocentric teams, such as the WellMart-G&P team. We think not. Both the theoretical reasoning and empirical analysis for familiarity were done on traditional teams, which come to work for the same organization every day and produce a service or product over time. Within certain parameters (such as the quality of their machinery), the output of the group is largely determined by how well each member does his or her activities and how well they coordinate these activities. Familiarity assumes learning over time in recurrent activities.

The WellMart-G&P team does not work that way. They do not produce a regular product through regular activities. Much of their work is piecemeal and indirect. For example, assume the team identifies a way to improve the forecasting of the demand for a product in a region, with the expectation of reducing future outages. Their job is to convince the appropriate people in marketing for G&P and purchasing for WellMart, plus some other people in such areas as information systems, to implement the new forecasting system. This activity is likely to be nonrecurrent, but the familiarity concept assumes recurrent work activities, as are seen in the cases of the 2 North miners or shared service center team.
The familiarity concept also assumes high levels of internal interdependence, and while some coordination is needed in the WellMart-G&P team, it is a relatively loosely coupled system, compared with the two traditional work-group examples. The familiarity concept also assumes stability in membership to permit members to learn about each other and their work environment, but some exocentric teams are continually reconfiguring with new members.

*Group Mood.* Another example of the difficulty in generalizing predictors from traditional groups to new forms of groups can be found in the research on mood. Evidence has been accumulating that group mood affects the behavioral outcomes of group members (such as absenteeism), as well as group performance (George 1990). George argues that there is both theoretical and empirical support for the importance of group mood (when individual affect is consistent within work groups). One basis for this argument is that attraction, selection, and attrition forces operate to create and maintain a consistent level of affect in traditional work groups. It seems unlikely, however, that these influences would operate the same way in exocentric groups.

In the case of cross-organizational teams, for instance, it seems unlikely that the G&P members would have been selected or socialized in the same way as the WellMart members. In addition, in the CER Teams, members may not work together long enough to develop the consistency of affective relations that would be required for a “group mood.”

For distributed groups, weakened social-influence processes would likely lead to less consistency in affect. In fact, George and Brief (1992) have acknowledged that group
mood is less likely to develop when group members are physically separated from each other.

**Leader Behavior--Monitoring and Feedback.** A third example illustrating the difficulty of generalizing findings from traditional groups to exocentric groups comes from empirical research on leadership with groups. One of the emerging findings in traditional group literature is that leader monitoring behavior is related to improved group performance. In a study of police sergeants, Brewer, Wilson, and Beck (1994) found that sergeants who spent more time monitoring performance had higher-performing teams. Sergeants who spent more time doing the technical work themselves (in this case, patrolling the streets) had less-effective teams.

A similar result was obtained by Komaki, Desselles, and Bowman (1989) in their study of captains of sailing crews. In this study, the captains remained with the boat while crews rotated across boats for various races, and success was measured by the number of races each captain won. The researchers identified two leader behaviors associated with success: monitoring performance and providing feedback about consequences.

Although monitoring may be possible and effective with traditional groups, its effects are less predictable with exocentric groups. If, as noted, the performance criteria themselves are not clear in some exocentric groups, it would be difficult for their leaders to provide accurate or useful feedback about consequences. In such ambiguous circumstances, attempts to provide feedback might result in simply communicating or reinforcing leader biases and assumptions to the groups. CER Team leaders, for example,
might rely on their own idiosyncrasies or implicit theories about effective groups in the absence of any clear performance measures.

Monitoring and feedback may be even more complicated in geographically distributed teams. One of the difficulties with working in these settings is the lack of social and context information. Cramton (1996) noted the tendency of remote members to misattribute the causes of problems. As in many ambiguous situations, outcomes were often attributed to internal factors rather than to situational constraints. Remote members often interpreted lack of response, for example, as a lack of interest.

This is especially problematic for leaders, whose attributions would have much more serious consequences for group members but would be subject to the same biases due to the lack of contextual information. Leaders’ attributional biases have been shown to affect not only their level of disagreement and conflict with subordinates (Fadil 1995), but also their performance evaluations (Knowlton and Ilgen 1980). Clearly, leader performance monitoring will not have the same effects in exocentric teams as in traditional teams.

New Approaches to Exocentric Teams

Thus many of the predictors of group process and outcomes identified in the literature may not fit exocentric groups. This dilemma creates a benefit. It forces us to rethink how we have been doing research on teams and to develop new perspectives for shaping how exocentric teams are designed and managed in practice. Here we focus on two questions: how should we rethink the unit of analysis of groups and what new concepts should we explore?
Events as Windows on Performance

In the past, both research and management attention have focused on the group itself and its ongoing or day-to-day antecedents, processes, and outcomes. In settings where group effectiveness is difficult to determine, group membership is constantly reconfiguring, and work is done in a distributed environment, it may be more sensible to focus on critical events as units for research and for interventions to change group behavior or performance.

That would be a fairly fundamental change, representing a theoretical shift from looking at large systems and their outcomes to understanding events within systems. Weick and Roberts’s (1993) description of landing planes on an aircraft carrier represents a critical event in the life of an organization. It captures many of the actors, structures, and processes of the organization, as well as its environment. It is only one of many events, however, and it is unlikely that the events combine neatly to provide a picture of the aircraft carrier as a whole. For a CER Team, determining whether there is a crisis or getting information from a vendor or another CER Team does represent a critical event in the life of this team.

To advocate studying events raises a series of questions. Should we adopt an effectiveness perspective and examine whether a particular landing or set of landings on an aircraft carrier is accident-free? Or should we focus on the processes of organizing and coordinating this complex event? Or should we examine the processes of coordination in light of some effectiveness criteria, such as accidents? While any of these event-based approaches can be a form of effectiveness study, the unit of analysis, time
frame, and predictors will be different from those in traditional group-effectiveness studies.

Another problem is that we do not have a good way to identify events, to determine which should be selected and why. In the CER Team example above, we used two critical events in the work process--determining if there is a crisis and writing an advisory. We identified these two events because they are central to the functioning of this group. For the WellMart-G&P team, negotiating with suppliers whose primary task is minimizing outages seems to be a central event. Thus, if one has a rich understanding of the team, identifying some critical levers appears fairly straightforward. For other situations, however, we need other analytic ways to uncover less obvious central events. The ability to identify key events will be an important mechanism for intervening and improving the performance of exocentric groups.

New Concepts for Analysis

The features identified in Table 1 to show contrast between traditional and exocentric teams can be used to generate new conceptual issues in the study of groups. We specifically examine two group processes: reconfiguration and joint optimization.

Reconfiguration Processes

One feature of exocentric teams is that they are dynamic, or continually reconfiguring. The CER Teams tend to reconfigure in days, while the software development teams tend to reconfigure after projects are done, typically in months. This is in sharp contrast to traditional teams, which are relatively stable.
The start-up processes involved in reconfiguring offer a new opportunity to examine another aspect of group functioning. How do these teams get started? Why do some start up faster than others? How are roles learned and coordination and communication activities enacted? Do norms develop for short-term exocentric teams?

While there is a socialization literature on groups (Moreland and Levine 2000), that literature is largely rooted in assumptions about longer-term traditional teams or on groups, such as firefighting units or SWAT teams, that respond to unique events but remain intact over time. It is difficult to imagine how the socialization cycles advocated by Moreland and Levine (2000) can be compressed in a three-day CER Team.

Reconfiguration means changing membership and changing discreet tasks. The basic idea in reconfiguration poses two interesting learning issues that have not yet been addressed in group research: short learning curves and transfer over time. These issues pose exciting opportunities for new group research and new challenges for group participants and managers.

**Short learning curves.** The start-up processes in exocentric groups are brief but critical. The question is why some teams move up this short-interval learning curve faster than others. A variety of interesting factors may play a role. First, members of CER Teams are loosely coupled. A good deal of their work is divided among the members, although there is some common work to be done. If roles are well rehearsed, group learning rates should be faster in a loosely coupled system than a more interdependent system, because there is less need to learn more complicated coordination and routines.
Second, the relationship between the group and the next level of analysis (the department, for instance) may shed light on the slope of the learning curve. The unit above the team may provide insight into the team’s rate of learning, because many of the norms CER Team and MST software development team members learn may come from the departments in which they work. These department-level norms may structure the processes in the exocentric teams and may affect their start-up.

Transfer of learning. The reconfiguration process also has implications for the transfer of learning. When the software development team disbands, there are probably lessons learned--perhaps about technical or organizing topics--that would be valuable for the next teams. Similarly, a WellMart-G&P team that goes out of business probably has learned a variety of lessons that might help other teams.

The question is how can this knowledge be stored and shared, independent of any specific group or individual? When the WellMart-G&P group goes out of business, how can the general and unique learning about reducing supply outages be transferred? How can the organization learn?

For such a complicated issue, a detailed analysis is well beyond the scope of this chapter, but some of the central questions it raises can be addressed. One is the location in which knowledge may be stored. Possible "memory systems" include text, computer-based systems, and people (Olivera 1998). A second question concerns what information may be stored. For WellMart-G&P, for example, information about how to deal with outages can be stored in terms of (1) content knowledge (specific processes about how to solve a problem) or (2) pointer knowledge (who knows how to solve the problem). The
former deals with the information while the latter deals with where to go to get information. The decision to sort the information into content or pointer knowledge will depend on whether the underlying subject is explicit or tacit in nature (Nonaka 1994).

The reconfiguration feature thus poses two interesting learning issues that have not yet been addressed in group research. These two processes – short learning curves and transfer over time – are exciting topics for new group research and practice.

Joint Optimization

Another feature of exocentric teams is that the members may not all come from the same organization (Table 1). This was a defining characteristic of the WellMart-G&P teams: Although members ostensibly shared a common group goal, they came from different organizations and were evaluated and rewarded against different criteria by their respective organizations. This is not characteristic of most traditional work groups, where all members work for the same organization with the same culture, goals, and sanctions.

The fact that in some new forms of groups, members may come from different organizations raises interesting questions about joint optimization, or the process of merging apparently conflicting interests in a synergistic way. The joint optimization process is defined by its result: an integrative solution or agreement that satisfies all aspirations to a greater extent than a simple compromise. Although the process of joint optimization has been applied to many different domains (Kolodny and Kiggundu 1980; Walton and McKersie 1965), our focus is on group members’ conflicting goals.
Conflicting goals. Conflicting interests and goals are not just a problem for cross-organization teams. These pressures are also common in distributed work groups. In the case of the software development teams, for instance, it would certainly be possible for the two members located in India to develop subgoals that conflicted with the goals of the UK members, or of the team as a whole.

Some might argue that these issues are similar to those encountered in more traditional cross-functional teams (Dennison, Hart, and Kahn 1996). Although some of what we know about cross-functional teams would apply to exocentric groups, we see some fundamental differences. In traditional cross-functional groups, for example, there is goal coherence at some level in the organization. Ultimately, everyone in the mining organization discussed earlier works to achieve some commonly accepted goal. This is not necessarily the case in exocentric groups. The highest levels of management in the parent companies of exocentric groups may have completely different goals for the team. Finally, traditional cross-functional teams can always identify a senior manager somewhere in the hierarchy who can resolve goal conflicts, but this is not possible when group members come from different organizations.

In some forms of exocentric teams, the goal of joint optimization poses some interesting challenges for group researchers and practitioners. Previously, we argued that the start-up process represents an important problem for exocentric teams primarily because of frequent reconfigurations of group membership. The start-up process is also complicated by the need to develop some shared understanding of joint optimization. Developing this shared understanding is difficult because (using the WellMart-G&P team as an example) members have spent their careers in different organizations and will return
to different organizations. One force for moving the group toward joint optimization is the group leader, whose activities may range from direct training on facilitating group processes to helping members manage difficult external relationships. A second mechanism may be retaining members from prior teams to help current team members operate in a joint optimization mode. The problems associated with joint optimization in these groups challenge the researcher to explore new forms of socialization processes and the practitioner to try different approaches to training.

Re-entry. Joint optimization can also be examined in the context of the re-entry process. There are unique issues associated with leaving an exocentric group and returning to the parent organization. Members may have difficulty readjusting to the parent company’s goals or norms; they may also have considerable difficulty transferring the knowledge they have gained in the group. Although there has been some research on the resocialization and exit processes in groups (Moreland and Levine 2000), it has focused more on what happens within the original group than on what happens to members in the transition between the group and the organization.

Several factors may affect the success of the re-entry process. The relative strength of the members’ attraction to the group and the parent organization is one. The stronger the identification of the members with the cross-company team, the more difficulties they may experience in the assimilation process. Members who remain highly identified with their parent organization may have an easier time in re-entry, but a more difficult time operating in the cross-company team.
Another factor affecting re-entry may be the absorptive capacity in the parent company. Organizations with greater expertise in managing diversity in organizational goals may be better able to absorb members from cross-organizational teams. Indeed, the capacity to re-assimilate members may be related to the parent organization’s past experience in dealing with different types of cross-organizational teams.

Thus, examining joint optimization at different points in the exocentric team's life--from initial socialization to re-entry processes--provides an opportunity to examine group processes that have not been fully explored in prior group research in organizations or in practice.

**Discussion**

There is little question that groups have become a more important part of organizational life. If the thesis advanced here is right, they are not only growing in frequency. New forms are emerging--exocentric forms--that pose novel challenges to both organizational researchers and practitioners. Their diffuse and hard-to-measure goals, changing and/or physically separated membership, and multiple constituents increase the likelihood of conflicts and need for negotiations’ skills on the part of both their leaders and members. Different assumptions underlie exocentric groups, which require new constructs and methods in order to advance theory and practice. The research questions, variables, and findings generated on traditional groups do not easily generalize to these new group forms.

This argument raises a set of questions. How prevalent are exocentric groups? Are they really emerging phenomena? Some research on this topic exists (see Kraut 1994; Crandall and Wallace 1997; Kemske 1998), but there is no systematic survey data
on the prevalence or growth of exocentric groups yet. This type of information would be informative to group researchers.

Nevertheless, it seems clear that some recent, recognized trends should facilitate the growth of exocentric groups. Rapid changes in information technology support the development of distributed work, and increasing globalization of markets forces firms to work in many environments. These two factors should encourage the frequency of distributed work, one element of exocentric groups. The emphasis on quality, customer satisfaction, and new forms of customer-firm relationships are also trends that support the emergence of exocentric groups.

A second issue is what makes a group exocentric? The distinction between exocentric and traditional groups does not lie on a simple continuum; rather it is spread across nine dimensions (see Table 1) and there are many different profiles among these nine dimensions. We could have a team that works together in the same space and time, for example, but constantly reconfigures. Or we could have a team that works separated by space and time but does not reconfigure. Which team is more exocentric? It is unclear.

This confusion seems quite compelling. However, our position is that the nine dimensions represent important, different group assumptions and that these assumptions have new implications for theorizing about groups. Our focus is on the assumptions underlying where a group fits in Table 1 and the implications of these assumptions for theory and practice. A group that bridges space and time creates a whole different set of challenges from a group whose members work together in the same physical space. In
addition, a group that continually reconfigures raises critical socialization and transfer-of-learning concerns.

A third issue is whether research posed by exocentric teams is complementary to the body of research and practice on work groups that has been developing over the last 25 years. That is, will research on exocentric groups take us down a different theoretical and empirical path from this prior body of work? We believe that the research is fundamentally different, but it may complement or suggest new approaches for traditional work-group research.

Reconsider our discussion on whether a group is stable or continually reconfigures. Continual reconfiguration means that traditional concepts of effectiveness and related criteria do not fit. Processes such as socialization take on very different meanings. Methodologically, this may mean we need to compare samples of events, not group outcomes. In our discussion of the CER Teams, for example, studying the effectiveness might mean focusing on the event of writing an advisory. We could examine the effects of different socialization processes on shared understanding of roles, goals, or the time it takes to write an advisory.

At the same time, there may be some interesting complementarity to research on traditional and exocentric groups. Studying events instead of group-level outcomes is a big switch. It requires us to learn what events to select and how to sample them. If we can learn more about event-based research, which is also being advocated in other areas of organizational research (Weick and Roberts 1993; Rousseau 1985), we may be able to translate some of these lessons to traditional group research. Reactions to events and performance outcomes may be critical indicators of group processes. Traditional group
activities are, of course, merely a collection of events. Subsequently, an event-based approach might lead traditional researchers to a more fine-grained understanding of group processes.

The other example of potential complementarity concerns new processes generated in exocentric group research and their applicability to traditional groups, such as the processes of learning. That is, teams that are continually reconfiguring need to find ways to transfer knowledge from one group to another. While this form of learning is introduced because of the reconfiguration process, it may have some applicability to more traditional teams among groups that work in different time periods or shifts or groups that perform the same functions but work in different geographical areas. In both of these cases (those with time and space differences), transfer of knowledge may positively impact both group and organizational effectiveness. Understanding this type of learning is critical for exocentric group research, and some aspects of this learning process may inform traditional groups that are not distributed in time or space.

The implications for practice follow the basic arguments about the distinctions between traditional and exocentric groups. Identifying and improving coordination in “events” may be a new perspective for intervening in exocentric group processes. We have argued that focusing on long-term training of group processes may not work in groups where members are continually reconfiguring. Rather, practitioners need to think about ways to create fast start-ups. In addition, our identification of learning and transfer of knowledge as critical to exocentric group functioning is important for both the practitioner and the researcher. Improving these learning processes will contribute to the viability of these new forms of groups.
Finally, we should note that new types of groups are likely to emerge in the future that are different from both the traditional and the exocentric groups discussed here. As in this case, practice is likely to be out ahead of researchers in developing whatever new forms emerge. Thus, our task will be to remain open to seeing new developments as they emerge and to understanding the different assumptions in these new forms and their implications for theory and practice.
Figure 1

A Heuristic Model of Group Effectiveness

Task Design
Group Composition
Organizational Context

Environmental Factors

Internal Processes
External Processes
Group Psychosocial Traits

Effectiveness
Outcomes
- Performance
- Attitudinal
- Behavioral

Simplified from Cohen and Bailey 1997.

Traditional Model of Group Performance

INPUTS
Group Composition
Group Structure
Resources
Organizational Context

TRANSFORMATION
Internal Processes
- Task
- Maintenance

OUTPUTS
Performance
Satisfaction
Adaptation

Source: Ancona 1990.

Normative Model of Group Effectiveness

Organizational Context

Group Design

Process Criteria of Effectiveness
- Level of effort
- Knowledge & skill
- Task performance strategies

Material Resources

Group Effectiveness
- Output acceptable
- Capability of members to work together in the future
- Members’ needs are satisfied

Source: Hackman 1983.
## Table 1

Contrasting Traditional and Exocentric Teams

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th>Exocentric</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effectiveness</strong></td>
<td>*internal</td>
<td>*external</td>
</tr>
<tr>
<td></td>
<td>*operational</td>
<td>*diffuse</td>
</tr>
<tr>
<td><strong>Membership</strong></td>
<td>*same organization</td>
<td>*different organizations</td>
</tr>
<tr>
<td></td>
<td>*100% in group</td>
<td>*&lt; 100% in group</td>
</tr>
<tr>
<td></td>
<td>*stable</td>
<td>*dynamic</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>*co-located in space and time</td>
<td>*distributed in space and time</td>
</tr>
<tr>
<td></td>
<td>*internally interdependent</td>
<td>*externally interdependent</td>
</tr>
</tbody>
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