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**MAKING TEAMS WORK:  
IMPLICATIONS FOR CONSULTING  
PRACTICE**

**CEO PUBLICATION  
G 98-27 (355)**

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**November, 1998**

To be published in (Ed.), Robert T. Golembiewski, *The Handbook of Organizational Consulting*. New York: Marcell Decker

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Making Teams Work: Implications for Consulting Practice

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The use of teams has increased dramatically in response to competitive pressures for speed, costs, quality, and innovation. For example, 82% of companies with 100 or more employees report that they use teams (Gordon, 1992). Seventy-nine percent of Fortune 1000 companies reported that they used self-managing work teams and 94% reported that they used employee participation groups in 1996 compared to 28% and 70% respectively in 1987 (Lawler, 1997). This growth in the use of teams has meant that organizations have provided consultants with myriad opportunities to help them increase team effectiveness. Many books have been written for the practitioner. For example, authors have written on increasing the effectiveness of self-managing work teams (Byham & Wilson, 1991; Orsburn, Moran, Musselwhite, & Zenger, 1990), cross-functional project teams (Parker, 1994), parallel learning teams (Bushe & Shani, 1991), and executive teams (Katzenbach, 1998). Other books have examined the design of team-based organizations (Mohrman, Cohen, & Mohrman, 1995) and the need for organizational systems to support team effectiveness (Sundstrom & Associates, 1999).

Academic researchers also have responded to the increased use of teams in industry by focusing more of their research on teams and team effectiveness. In the last decade, hundreds of studies have been published about teams in a variety of academic journals. Consultants and practitioners often do not read academic journals, and as a result, the findings from empirical research do not typically inform consulting practice. Consultants are more likely to read practitioner-oriented books (such as ones cited above), but most of these books are not based on systematic empirical research, but rather on collected experiences. The aim of this chapter is to summarize the findings from recent empirical studies on team effectiveness in organizational settings, and to draw out their implications for consulting practice. In 1997, the authors of this chapter published a review article on teams and team effectiveness in the *Journal of Management*. Limiting ourselves to empirical studies of teams in organizational settings, we selected 200 articles for possible inclusion and ultimately focused on 54 studies of teams in organizations that included measures of effectiveness and were carried out in the period between January 1990 and April 1996. We

include in this chapter a few additional studies published after April 1996. We present the major findings from the studies that we reviewed and their implications for consulting practice.

This chapter is organized in the following way. First, we discuss the studies in which performance outcomes varied for different types of teams. Second, we describe key points that emerged from these studies that we believe will generalize across team types. Third, we examine a few areas in which further study is warranted. We conclude by summarizing the major lessons for consultants from recent empirical work. We discuss in greater detail the implications for consulting within each section of the chapter.

### Type of Team Matters

The most critical learning from this set of studies is that teams differ substantially by type, and that type of team matters for determinants of effectiveness. Four types of teams can be identified in organizations today: 1) work teams, 2) parallel teams, 3) project teams, and 4) management teams. Other sources use slightly different typologies (Katzenbach & Smith, 1993; Mohrman et al., 1995; Sundstrom & Associates (1999), but their categories overlap with ours. Work teams are continuing work units responsible for producing goods and providing services. Their membership is typically stable, usually full-time, and well-defined (Cohen, 1991). Parallel teams work outside of—in parallel to—the formal organizational structure and they generally make suggestions or recommendations for improvement to management (Ledford, Lawler, & Mohrman, 1988; Stein & Kanter, 1980). Project teams have specific tasks to complete within designated time periods, producing one-time outputs (Mankin, Cohen, & Bikson, 1996). Management teams are responsible for the performance of a business unit, providing direction to the sub-units under their purview. They consist of managers and their direct reports. These different types of teams all are teams, that is, they are groups of individuals interdependent in their tasks, who share responsibilities for outcomes, manage their relationships across organizational boundaries, and see themselves (and are seen by others) as intact social entities embedded in larger social systems (Hackman, 1987; Alderfer 1977).

By distinguishing among types of teams, we were able to show that studies of different types of teams examined different predictors of effectiveness. For example, studies of work teams and project teams were more likely to evaluate the impact of task design than studies of management teams or parallel teams were. Studies of project teams examined the impact of group processes external to the team; no studies of other types of teams looked at external group processes. The vast majority of management team studies, but almost no project team study, looked at the impact of group composition variables on effectiveness.

The studies of different types of teams also varied in how they measured effectiveness. About half of the work and parallel team studies, and almost all the management team studies, used objective measures for performance effectiveness, but no project team study did. Effectiveness was typically assessed at the group-level for work, parallel, and project teams, and at the organizational level for management teams. Most studies had multiple measures of effectiveness, and findings frequently varied across measures of effectiveness (e.g., variables that predicted innovation did not necessarily predict speed).

What this means for the consultant is that she must be a careful consumer of academic research. A study of one type of team does not necessarily generalize to another type of team. What predicts success in one type of team may not predict success in another. For example, as discussed below, autonomy or self-management has been a key predictor of success in work teams. However, the few empirical studies of project teams have not found member autonomy to be associated with project success.

The consultant also has to be careful about generalizing from her experience with team consulting. If the consultant has primarily worked with one type of team, she should not assume that her methods and approaches will be successful with another type of team. For example, members of self-managing work teams in manufacturing facilities often rotate jobs and can perform all the tasks in their work cell. Job rotation and multi-skilling usually does not make sense for project teams members who apply their distinct

specialty to the development of a new product or service. We are arguing for a differentiated approach to team consulting: if you have a hammer, it doesn't mean what you see is a nail. What you need is a toolbox, with tools that fit the variety of team types being used today.

### Improving Team Effectiveness

Traditionally, team consultants have used a team-building approach to help organizations improve team effectiveness. The term team-building generally refers to methods and techniques that focus on internal team processes and dynamics, such as problem-solving, conflict-resolution, building trust, enhancing communication skills, and improving team relationships. The team-building approach reflected the interest of early researchers on team dynamics (for example, see Cartwright and Zander, 1968). The problem with team-building interventions is that the empirical evidence for their efficacy remains elusive. Since the early days of sensitivity training to the current interest in team-building in wilderness settings, a meaningful link between just internal processes and performance has yet to be demonstrated (Mankin et al., 1996; Dunnette & Campbell, 1968; Kaplan, 1979; Wagner, Baldwin, & Roland, 1991). Part of the problem with team-building interventions generally is that they are reactive; they come into play when problems emerge and generally do not deal with the root causes of those problems. In addition, a focus solely on team-building is narrow; it does not address the set of factors that potentially impact team performance.

Currently, consultants are more likely to take a more proactive and comprehensive approach to improving team effectiveness. This change may reflect an awareness of current research on team effectiveness that addresses a broader set of factors influencing team effectiveness. Design factors are those features of the task, group, and organization that can be directly implemented by managers to create the conditions for effective performance. For example, the design of the team's task, its goals, its composition, and the feedback it receives on its performance, provide a foundation for effective performance. Process factors include not only the internal group processes of the team, but external

processes with key stakeholders that may influence how the team performs. The way teams are designed and the processes that are used may influence the shared understandings, beliefs, or emotional tone--what we call "group psychosocial traits." These shared cognitions and emotions also may impact performance. These categories of variables are potential points of leverage for consultant interventions. For example, a consultant hired to help an organization improve the effectiveness of its teams may find herself helping the organization redesign its performance management and reward systems so that teams set appropriate goals and receive bonuses based on goal accomplishments. Just as the consultant needs a toolbox with tools that fit the variety of team types, the tools need to be used on a variety of organizational mechanisms.

What follows below are key findings from the set of studies we reviewed that differentiate among types of teams. These findings deal with team, task, and organizational design, internal and external group processes, and team psychosocial traits. They cover areas that consultants and managers can influence, such as the design of participation systems, the amount of autonomy provided to team members, and the types and amount of diversity on teams.

#### Substantive vs. Consultative Participation

A considerable amount of recent research has been conducted in the areas of team autonomy and worker participation. To facilitate our discussion of this work, we distinguish between two types of participation--substantive and consultative--based on the definitions of Levine and Tyson (1990). Substantive participation necessitates fundamental changes in work organization . An example of substantive participation is found in self-directed work teams, whose high levels of group autonomy dramatically alter the work roles of members and supervisors. Numerous studies have been conducted to examine the benefits of self-directed teams in particular and autonomy in general. Consultative participation involves eliciting suggestions from employees in ways that do not disturb the established work organization, as managers retain control over decisions. Parallel teams such as quality circles and process

improvement teams typify consultative participation. While the use of consultative teams is quite common, little academic research has been performed on them.

Worker participation of either form, substantive or consultative, is theorized to enhance performance. Although this contention has been challenged in the past (e.g., Locke and Schweiger, 1979), a recent meta-analysis (Wagner, 1994) indicates that participation has a positive, albeit small, relationship to performance. From a consulting perspective, one might accept the positive impact of participation, but wish to know further *which type* of participation is better. Only two studies have directly compared substantive to consultative participation. Both of these papers examined participation at multiple sites; the results are discussed below. Quite a number of other studies have studied one form of participation alone, often at a single site. Results from these studies are presented to help separate participation's effect on attitudinal, behavioral, and performance outcomes, as an intervention may be concerned with one outcome over the others.

Batt and Appelbaum (1995) examined work groups in telecommunications and apparel industries. At all sites in their sample, both traditionally managed and autonomous work groups were employed. In addition, workers could participate in off-line, consultative teams such as quality of work life teams and training committees. Consultative participation was never significant in models predicting satisfaction, organizational commitment, and workers' perceptions of quality among the telecommunications workers, while among the sewing operators it had a mildly significant effect only on organizational commitment. Substantive participation was always significant for both samples, and it remained a significant predictor of workers' ratings of quality even after the model controlled for a full array of human resource and employment relations practices. Substantive participation thus proved a far superior positive predictor of outcomes than did consultative participation.

A very different conclusion was presented in a study of production operator teams in the semiconductor industry (Bailey, 1997, 1998). Workers engaged in substantive participation in the form of

self-directed work teams exhibited higher satisfaction and self-perceptions of performance, results that are very similar to the Batt and Appelbaum findings. However, workers whose participation was consultative—via continuous improvement teams that contributed suggestions to management—had significantly higher *objective* performance as measured by direct and indirect labor productivity. The difference between attitudinal and perceived performance results on the one hand and objective results on the other may have been a function of the self-directed work teams coming to believe that the goal had been changed from "pushing wafers" to "being a good team member." In addition, the high-technology setting increased the significance of the interface between the production teams and the large engineering workforce. Problems in facilitating management of this interface also may have affected performance in the substantive arrangements (where production roles were expanded to overlap with engineering duties) more than in the consultative ones (where they were not). This study suggests that self-managed teams may not be appropriate for all work settings, or at least that models of implementation and management may need to be adjusted to the environment.

Among studies that examined a single type of participation, substantive participation appeared to have a quite positive impact on attitudinal outcomes, and a mixed effect on behavioral ones. Autonomy was positively associated with satisfaction for self-directed work teams in both manufacturing (Cordery, Mueller, & Smith, 1991; Pearson, 1992; Seers, Petty, & Cashman, 1995) and service (Cohen & Ledford, 1994; Cohen, Ledford, & Spreitzer, 1996) environments. Autonomy was further found to be positively associated with the attitudinal measures of organizational commitment (Cordery, et al., 1991; Cohen et al., 1996) and trust in management (Cohen et al., 1996). In contrast to these favorable attitudinal results, absenteeism was found to be higher among autonomous teams than traditionally managed ones in one study (Cordery, et al., 1991), albeit relatively stable in another (Pearson, 1992). A somewhat positive behavioral result is found in Pearson's (1992) study of an engineering workshop. Accidents increased among non-autonomous groups while remaining constant for semi-autonomous ones. The latter were

observed to include job safety in their discussion periods, while non-autonomous groups relied upon safety representatives to uncover unsafe work practices. In general, the behavioral effects of substantive participation are less positive than the attitudinal ones.

In the realm of performance, substantive participation appears to have a positive impact in most studies. Autonomy was found to be positively associated with both team-rated (Cohen & Ledford, 1994; Cohen et al., 1996) and manager-rated (Cohen & Ledford, 1994) performance. Positive objective findings were reported by Banker et al. (1996), whose longitudinal study of high-performance work teams with substantive decision-making powers in an electromechanical assembly plant revealed increased quality and labor productivity measures following the team intervention. Positive results spanned both service industries (Gupta, Dirsmith, and Fogarty, 1994; Campion, Medsker, and Higgs, 1993) and manufacturing ones (Pearson, 1992). In the latter study, autonomous groups made more efficient use of their manpower, eliminated unnecessary work, and acquired more relevant work knowledge. One study (Yammarino and Dubinsky, 1990) found no relationship between autonomy and performance, but it is not clear if the teams in the study (collections of individual salespeople who lacked collective responsibility but reported to the same manager) were true examples of substantive participation. Thus substantive participation, as indicated by autonomy levels, seems to have a positive association with performance.

A study by Kirkman and Rosen (in press) suggests that team empowerment, a construct that is broader than self-management, will have a stronger impact on team outcomes than autonomy taken by itself. Team empowerment is defined as having four dimensions: (1) potency, or the collective belief of a team that it can be effective, (2) meaningfulness, or the degree to which a team's tasks are aligned with the values, beliefs, and attitudes of its members, (3) autonomy, or the degree to which tasks provide the team with substantial freedom, independence, and discretion, and (4) consequences, or team members' knowledge that a team's tasks have a significant impact on the organization (Kirkman and Rosen, 1997). The authors examined 111 teams from four firms that represented both service and manufacturing

domains as well as high- and low-technology ones. They found that team empowerment was positively associated with an impressive array of performance and attitudinal outcomes, including productivity, proactivity, customer service, job satisfaction, organizational commitment, and team commitment. In hierarchical regression models in which autonomy was entered before team empowerment, the authors found support for their contention that team empowerment added significantly to the explanatory power of the models.

Consultative participation did not fare as well in any realm, albeit there are few studies in this area. Adam's (1991) longitudinal study of four quality circles in two manufacturing and assembly plants revealed a negative relationship between participation and satisfaction; his results are similar to those of previous studies (e.g., Griffin, 1988; Marks, Mirvis, Hackett, & Grady, 1986). Steel, Jennings, & Lindsey (1990), found that managers' ratings of performance were no higher for quality circle employees than for non-circle employees at a U.S. federal mint, but that circle participation was negatively associated with absenteeism. Thus, the only positive result for consultative participation is a behavioral one.

Overall, with the exception of the study by Bailey (1998), recent studies indicate that substantive participation in the form of self-directed work teams has clear benefits. Worker autonomy enhances worker attitudes, behaviors, and performance. In contrast, the largely negative results for consultative participation suggest that it lacks such benefits. The studies of the past six years tend to be consistent with the findings of recent reviews that examined the literature of the past thirty years. In a meta-analysis of 131 North American field studies involving organizational change, Macy and Izumi (1993) determined that autonomous and semi-autonomous teams had a significant effect on an organization's financial and overall performance while other team configurations (e.g., quality circles, general work teams, and employee involvement teams) did not. Although the particular meta-analysis technique employed by the authors was highly exploratory, their results are similar to those of Cotton and colleagues (1988, 1993), who in their surveys found that self-directed work teams have had a stronger effect on performance than

have parallel teams. The caveat that we add to this summary is that, while substantive participation appears to be better than its consultative alternative in many instances, the form of participation ultimately should be tailored to fit the work to be accomplished, the work environment, and the business objectives.

The apparent superiority of substantive over consultative participation has significant implications for consulting practice. With the advent of the quality circle movement in the 1970s and 1980s, a consulting industry emerged to help companies implement quality circles. Quality circles grew in popularity until the late 1980s, when their usage began to wane (Lawler & Mohrman, 1985). In the late 1980s and early 1990s, many companies adopted total quality management and implemented quality improvement teams throughout their organization. A consulting industry also has grown up around implementing quality improvement teams (also called quality action teams, kaizen teams, or process improvement teams) for organizations. Quality circles and quality improvement teams both are parallel structures, and thus constitute forms of consultative participation. Although the number of academic studies is limited, they do not suggest that these structures are particularly effective in generating performance improvements or positive employee attitudes. In other words, existing empirical research results contrast dramatically with the claims made by the consultants (and companies) implementing consultative participation team structures and activities.

The studies do not indicate whether it's the form, the parallel structure, or the method of implementation that leads to consultative participation's disappointing results. The advantage of the parallel structure is precisely its disadvantage --the organization does not have to change to support it. It is possible that the lack of systemic changes in the organization, such as information or reward system changes designed to support participation, limit the efficacy of parallel teams. If it is not the parallel structure per se but how it is implemented, then the research on substantive participation is suggestive. The more that parallel teams deal with real (substantive) business issues and directly focus on performance improvements, the more likely they will be able to achieve their goals. Clearly more research

is needed before firm conclusions can be drawn (particularly on parallel teams other than quality circles), but the practitioner audience should be skeptical of the performance claims made for parallel structures.

#### Autonomy for Work Groups, Not Project Teams

Interestingly, when it comes to autonomy, what is good for the gander may not be good for the goose. Although research indicates the positive relationship between autonomy and work team effectiveness, several recent studies indicate that autonomy and project team effectiveness do not go similarly hand in hand. Henderson and Lee (1992) found that the highest performing teams in a sample of 41 information systems design teams across 10 organizations were those in which managers retained control over assigning specific work assignments to team members and developing task procedures rather than granting authority in these areas to the team itself. Similarly, Kim and Lee (1995) found that team autonomy had a negative association with performance among 80 R&D teams in both government-sponsored research institutes and private R&D centers in Korea. Autonomy had a positive impact on the team's performance only when the organizational climate favored innovation and work pressure was high. In a survey of 378 project team members at three R&D facilities in the electronics industry, Levi and Slem (1995) found that self-management was not significantly related to team members' perceptions of team effectiveness. Most respondents reported that their team leader had retained control over most decisions, and most believed their leaders performed well. Further, leadership was found to be strongly correlated with perceptions of team effectiveness. Ancona (1990) found that in the beginning stages of a state educational program involving five consulting teams, management was unclear about team goals but claimed teams had autonomy. In that initial environment, more active teams fared better. However, when management later became more clear in its aims and set constraints on what the teams could do, an active team that tried to fight this sudden imposition of external control was branded a "trouble" team and was rated poorly by the managers. In each of these studies, project teams with higher autonomy were not the best performers.

Consultants considering implementing project teams with the same high autonomy they establish for work teams might do well to consider the results presented here. Why is team autonomy not a positive predictor of project team performance? The project team members in these studies were all professionals, who conceivably may enjoy considerable discretion in other areas of their job, and thus feel less need for it in their project team participation. This interpretation is supported by recent work by Uhl-Bien and Graen (1998), who found individual self-management to be positively associated with effectiveness for professionals in functional units but not in cross-functional teams. Of note, however, is the further result that self-management was positively associated with job satisfaction among professionals in both types of work structures. In interviews with project team members, Henderson and Lee (1992) found that members appreciated the manager's ability to bring domain knowledge to bear in work assignment and procedure clarification. In these tasks, both a technical and a social perspective was required; the implication is that managers have both perspectives while team members lack the latter. Perhaps project team autonomy is only important to the project leader, whose name may be prominently associated with the project's success or failure, and who may be the primary conduit to external management (see Hansen, 1995) for a qualitative observation study of one project leader's interactions with management). We hope that future studies will examine more thoroughly how autonomy manifests itself among project team members and leaders. Clark and Wheelwright's (1992) work on the types of project team leadership structures is a step in the right direction, but it too leaves unclear the degree of decision-making control held by team members. In the interim, consultants should carefully consider the other roles played by members, the nature of the work to be done, the knowledge domains of all relevant persons, and the manner in which performance is evaluated and credit given when determining the locus of decision-making control (e.g., managers, leaders, team members, or combinations thereof) for project teams.

#### Diversity in Teams

The increasing diversity of the U.S. workforce has generated interest in exploring the impact of diversity on effectiveness. In the last two decades, there have been numerous initiatives to manage and reap performance improvements from diversity (Thomas and Ely, 1996). Diversity consultants have established programs aimed at enabling members of one demographic group to become more sensitive and to learn the perspectives of other demographic groups. The conventional wisdom espoused by diversity consultants (and the popular press) is that companies that learn how to effectively manage diversity will perform better, because they utilize the full contributions of their members. Unfortunately, the empirical evidence is not yet in place to support these claims (Jackson, May, & Whitney, 1995).

The number of empirical studies of diversity at the team level is quite limited. In the review that we completed, we did not find one study pertaining to gender, racial, or ethnic diversity in teams. We were surprised and disappointed by the absence of studies in this area, and it is unfortunate that the empirical research lags so far behind the concerns most immediately relevant to practice. Because workplace and consequently team demographic diversity is here to stay, new research should be focused on the conditions and practices that enable diverse teams to be effective.

The studies of top management teams were the most likely to look at the performance impact of demographic factors. However, top management teams tend not to be diverse in terms of gender and race, and the archival records used by researchers do not indicate ethnicity. The studies of top management teams did look at the impact of heterogeneity of the ages of top managers and found that it was related to turnover (Jackson et al., 1991; Wiersema & Bird, 1993). In general, differences in the attributes of the top managers predicted top team turnover, for example, educational background (Jackson et al., 1991; Weirsema and Bird 1993). The researchers explain this finding using Schneider's (1987) attraction, selection, and attrition theory, which suggests that people are most comfortable remaining at work with others who are similar to them and least comfortable with those who are different. Dissimilarity

in ages or educational background may create discomfort, and those that are dissimilar may be encouraged to leave.

The type of diversity most frequently studied was diversity in knowledge and skills, sometimes measured using survey questions, and other times measured by the number of functions represented on teams. Bringing diverse perspectives and skills to bear on shared problems should positively impact performance outcomes such as innovation and learning. However, the relationship between functional diversity and performance is complex and varied with the type of team. For work teams in an insurance company, Campion et al. (1993) found skill heterogeneity to have no relationship to productivity, employee satisfaction, and manager ratings of performance. For parallel employee involvement teams in a computer manufacturing facility, Magjuka and Baldwin (1991) found functional diversity (measured as the proportion of various job categories) to be positively related to self-reports of performance effectiveness. For project teams, Ancona and Caldwell (1992) found a mixed effect: the direct impact of functional diversity on managers' performance ratings of the team was negative, but the indirect impact through increasing the amount of external communication to stakeholders on managers' performance ratings was positive. The negative direct impact on performance was stronger than the indirect positive one. For top management teams in the computer industry, Halabien & Finkelstein (1993) found that functional heterogeneity was negatively related to performance. In contrast, Smith et al. (1994) found no relationship between functional heterogeneity and performance for the top management high technology teams he studied. Surprisingly, functional diversity was not related to internal team processes in Ancona and Caldwell's (1992) study of project teams and Smith et al.'s (1995) study of top management teams. Although several theoretical articles have been written about the impact of diversity on communication, decision-making, and conflict-resolution (Maznevski, 1994; Jackson, et al., 1995; Pelled (1996), careful empirical field work is needed. Researchers need to carefully examine the relationship between different types of diversity, internal team processes, and specific performance outcomes.

The results from this set of studies on team diversity do not provide clear guidance to the consultant. The findings vary across type of teams and are not consistent across multiple studies (where they existed) within team type. The consultant cannot assume that specific types of diversity automatically lead to performance improvements. She should be skeptical of exaggerated performance claims. More research is clearly needed to guide practice in this area.

### Key Findings Across Team Types

Three key points that emerged from this set of studies we believe will generalize across team types. They are: (1) Ratings of performance success depend upon who is doing the rating; (2) Cognitive and affective dimensions of key variables have different impacts on team effectiveness, and (3) What contributes to performance at the team level may not at the organizational or individual level. Each of these points is discussed below.

#### Who's doing the rating?

One recent project team finding that we expect can be generalized across types of teams is that the factors most associated with success vary based on who is rating the team's performance. The study by Ancona and Caldwell (1992) provides an excellent example of this point. For 45 new product teams in high-technology companies, internal task processes were positively related to team members' ratings of their own performance. In other words, if the teams were perceived by members to exhibit good working relations within the team, then the team members were more likely to say the team was a success. By way of contrast, managers were more likely to rate a team a success if it exhibited high external communication. In an earlier study that Gladstein (1984) completed using telephone sales teams (work teams), members also self-evaluated effectiveness based on internal group processes, which had no relationship to objective measures of performance.

In Ancona and Caldwell's study (1992), the difference in predicting factors may emanate from differences in information sources or values about what is important. Managers are no doubt less likely to

be aware of how well a team works together, being absent from most team meetings. They instead gather information and form opinions from communication the team conducts with key stakeholders across its boundaries. They also may not consider the team's internal processes as important as whether it satisfies the requirements of key external stakeholders. In contrast, team members know how well they work together, and are likely to care about their relationships with one another. What signifies success for managers, by virtue of their different vantage point, is not the same as what signifies success for the teams themselves.

That team members tend to rate the team's performance highly if the team has engaged in healthy internal processes such as collaboration and resolution of conflict, and that managers are more likely to rate a team highly according to external factors, does not imply that subjective measurements necessarily should be replaced by objective ones. Objective measures should be sought if what we are interested in is how well the group is achieving quantitative goals. But in many instances, we are interested in the perceptions of effectiveness from key stakeholders.

The message here is that consultants might focus on different factors depending on who their client is for a team intervention. If the team itself is the client, then team-building interventions may help to improve perceptions of success. If the team's manager is the client, then attention should be paid to encouraging and supporting communication between teams, its manager, and other key stakeholders. If there are multiple clients, then a more comprehensive approach should be taken. We note that encouraging positive perceptions from either group of stakeholders does not ensure positive objective performance. For example, the study of semiconductor production teams (Bailey, 1998) revealed that groups with more team dynamics training had higher perceptions of performance, but lower productivity than teams with less training. In Gladstein's study (1984), perceptions of performance were unrelated to objective performance outcomes. However, because teams may be implemented for a variety of reasons

other than improving objective performance, various types of training and infrastructure may prove useful in achieving success.

### Cognition and Affect

Perhaps one of the most interesting results from recent team research lies in the separation of cognitive and affective aspects of a traditional group processes variable: group conflict. Jehn (1995) surveyed 79 work groups and 26 management teams in a large freight transportation company. She separated conflict into two types: relationship conflict (an affective component representing interpersonal incompatibilities, tension, animosity, and annoyance) and task conflict (a cognitive component reflecting disagreement among group members about task content). For groups performing routine tasks, task conflict proved to be detrimental to group processes. However, in those groups performing non-routine tasks, task conflict was not detrimental; in fact, in some cases it was beneficial. Task conflict appeared to promote critical evaluation of problems and options while simultaneously reducing thoughtless agreement. The benefits of task conflict did have their limits; at high levels of conflict, members became overwhelmed with information and lost sight of the group goal. Relationship conflict was detrimental to satisfaction and to members' intent to remain in the group regardless of the type of task, but it had no impact on performance. It appears that group members simply avoided those people with whom they did not get along. It is no surprise, then, that interdependence increased the negative impact of relationship conflict.

Amason (1996) continued the study of cognitive versus affective conflict by examining their effect on strategic decision quality, understanding, commitment, and affective acceptance among top management teams (TMTs) in the food processing and furniture industries. He predicted that TMTs with higher levels of cognitive conflict would produce higher-quality decisions, have higher levels of understanding, be more committed, and have greater affective acceptance. TMTs with higher levels of affective conflict would produce lower-quality decisions, have lower levels of understanding, be less committed, and have less affective acceptance. He found that cognitive conflict was positively related to decision understanding

and affective acceptance, while affective conflict was negatively related to decision quality and affective acceptance. His results concur with those of Jehn.

Many teams receive training in conflict-resolution, so that they can effectively resolve conflicts and prevent their escalation. The studies by Jehn and Amason suggest that teams should be counseled to differentiate between the affective and cognitive bases of conflict. If their task is non-routine, they should be trained to recognize that a certain amount of task conflict is a healthy sign. They could be coached on how to challenge one another's ideas without challenging one's abilities, how to play the devil's advocate, and how to argue from the perspective of competing groups or external agents. Their training on affective conflict, on the other hand, should stress that this type of conflict be prevented, if at all possible, and resolved immediately if it occurs. It is of particular note that these two studies found similar results when examining two very different types of teams: work groups and top management teams. At both ends of the spectrum, it seems, disagreements of a personal nature are detrimental, while those related to the task are beneficial. Thus, while the content of the examples used in training for these groups should differ substantially, the message should be the same.

Another arena in which affective and cognitive components of a traditional variable have been separated is that of cohesiveness. Four recent meta-analyses of cohesiveness have been conducted using both laboratory and field findings. Three studies (Evans & Dion, 1991; Mullen & Copper, 1994; Gully, Devine, and Whitney, 1995) found a moderately strong positive relationship between cohesion and performance. Mullen et al. (1993) conducted the fourth meta-analysis to examine the impact of cohesiveness on group decision-making quality. They found that the more the operationalization of cohesion tapped into interpersonal attraction (i.e., affect) as opposed to agreement on the task and goals (i.e., the cognitive work elements), the more cohesiveness impaired group decision-making. This study underlies the importance of gaining agreement from team members in their understanding of the task to be performed, the methods to be employed, and the level of performance to be achieved. It suggests that

such cognitive agreement is more important for performance than getting everyone on the team to like one another. Thus, in accord with the work on conflict, the work on cohesion supports the idea that cognitive aspects of group interaction and traits have greater association with group performance than affective aspects have. The studies that we cite on affective conflict and cohesion are cross-sectional, and we believe that there may be long term ramifications that differ from their short-term effects on performance outcomes. For example, if people who work together do not like each other (low affective cohesion), they may be more likely to leave a job than those who do like each other.

Several studies have begun to examine other issues of affect and cognition in work groups. For example, George (1990) examined shared affective tone among sales groups. Negative affective tone was a significant negative predictor of customer service behavior; positive affective tone was negatively associated with absenteeism. While field studies on affect are few in number, recent experimental work has shown that moods can affect judgments in group discussion tasks (Forgas, 1990). However, much of the work on affect and mood remains at the individual level.

The work on group cognition is similarly in its early stages. Weick and Roberts (1993) discuss the existence of a collective mind, defined not as the sum of individual knowledge, but rather as the interrelation of actions carried out within a representational understanding of the system. The idea of a collective mind appears in Wegner's (1986) concept of transactive memory. Shared experiences may lead groups to code, store, and retrieve information together. The memory is not only the sum of individual memories, but also the awareness of who knows what. In a laboratory experiment, Liang, Moreland, and Argote (1995) documented the creation of a transactive memory through group training. Groups that were trained together in a radio assembly task produced higher quality radios than groups whose members were trained alone. Group members specialized in remembering distinct aspects of the assembly procedure, coordinated their efforts smoothly, and trusted one another's knowledge about assembling the radio. Future work hopefully will continue to map out the relationships between group cognitions, group affect,

and group effectiveness. Although field research needs to be done on transactive memory, these findings suggest that intact teams should be trained together, when members will be performing interdependent tasks. Training individuals on the knowledge and skills required for team tasks may not be as efficacious as training the teams as intact units.

### Team, Individual and Organizational Performance

Performance outcomes occur at multiple levels in organizations: individual, team, business unit, and the whole organization. Outcomes can be related to one another in complex and sometimes conflicting ways (Argote & McGrath, 1993). For example, a project team may accomplish its project goals, but not contribute to its business unit's success, because it wastes resources or detracts from other efforts with which it is interdependent. Conversely, business unit managers may make decisions that contribute to unit performance but diminish a project team's performance, for example, by removing key personnel from a less to a more strategically important project. Few studies that we reviewed compared performance at multiple levels and no study examined performance trade-offs at different levels. Instead, discussions about level of analysis were concerned with choosing the appropriate statistical methods for justifying aggregation. Future research should examine the impact of team behavior at multiple levels for performance and generate theory to account for the conflicts that will likely occur.

The implication for consultants is that they need to focus on team performance in context. It is possible to help a team achieve its goals, at the expense of the business unit achieving its goals. Traditionally consultants who have used goal-oriented approaches have concerned themselves with aligning individual and team objectives to get all members to pull together. Now we are suggesting that they extend their gaze upward to align team objectives across the organization. Consultants need to understand what the performance objectives and metrics are for the business unit in which the teams are embedded, as well as the goals and objectives for the teams themselves. Teams also should have the information about the broader business unit's goals so that they can focus their efforts appropriately. If

goals are not appropriately aligned across levels of the organization, the consultant can provide this feedback to management. By helping management to align goals at the various systemic organizational levels, the team consultant can prevent teams from suboptimizing their performance.

### Need for Further Research

The leadership of teams is an important area for new empirical research. We expected to find several empirical studies of team leadership and were surprised that there were few in the time period we reviewed. Team leadership needs to be understood in context and at multiple levels. How does organizational and business unit leadership affect the success of teams? How do behaviors of the team leaders that directly manage teams influence performance? How should team leader behavior differ for different types of teams? Consultants could clearly benefit from empirical studies that directly addressed these issues.

Another area that needs further study from field researchers is team development. Most team researchers take a static view of teams, and do not collect data over time. There have been few field studies of team development and most of our existing knowledge does not come from teams in organizational settings. Yet, teams change over time, and their development influences many of their social and cognitive activities (Worchel, 1994). Two interesting findings from an existing study is that early group actions or decisions have an impact for a long time afterwards, and that project teams are most opening to receiving help and changing their course at the midpoint of their life span (Gersick, 1988). Future field studies might examine the conditions that promote effectiveness in a team's earliest stages and identify the types of interventions most helpful to teams at their mid-point. Managers and consultants frequently work with teams over long periods of time, and it would be helpful if empirical research were able to provide guidance to key developmental issues.

A third area concerns a relatively new type of team. Increasingly, organizations use "virtual teams" whose members are not co-located and who rely on electronic forms of communication to stay in touch.

These teams often involve members from multiple countries as firms become global in their reach. Sometimes team members are drawn from multiple organizations. What enables virtual teams to be effective? What impact do cultural differences have on team processes and performance? What role do existing and new communications technologies and group decision support technologies play in promoting virtual team effectiveness? Consultants already are being asked to provide support to organizations using virtual teams. Research lags practice and should catch up.

Finally, we did not review any studies that examined team consulting. What types of consulting interventions contribute to team effectiveness? How should a consultant focus her efforts? Are consulting interventions aimed at increasing contextual supports for teams more efficacious than those directed at the team itself? What about the timing of consulting interventions? For teams with defined life cycles, are interventions at the beginning and the mid-point more effective than interventions at other times, as Gersick's (1988) work suggests. Again, this is a fruitful area for future research.

### Conclusion

This chapter has examined the implications for consulting of the key findings from recent empirical studies of team effectiveness. Summarized below are seven key findings and consulting implications from this body of work:

1. The predictors of team effectiveness often vary for different types of teams, which means that consultants need to be cognizant of the type of team with which they are working. They should tailor the factors they address and the approaches they use to fit that type of team.
2. Team consultation goes beyond team-building: a comprehensive approach considers multiple points of leverage and multiple levels (individual, team, business unit, and organization) of performance outcomes. Because teams exist in an organizational context, consultants should understand the performance requirements for the team, its business unit, and broader organization. Consultants may need to help managers align goals across organizational levels, so that performance suboptimization

does not occur. Often team consultation involves helping an organization redesign systems and practices to support teams.

3. Substantive participation is more likely to enhance performance than consultative participation. In other words, self-managing work teams are more likely to perform effectively and positively impact member attitudes than parallel teams, such as quality circles or quality improvement teams. A consultant needs to be skeptical of the performance claims made for parallel structures.
4. Although autonomy in work teams promotes effectiveness, autonomy has not been found to promote effectiveness in project teams. Consultants should be hesitant to increase project team self-management, and should focus instead on building effective project team leadership.
5. Having diverse teams, in terms of member knowledge and skill backgrounds, does not necessarily increase team effectiveness. Furthermore, the impact of functional diversity varies across types of teams. More research is needed on how to enable teams comprised of members from diverse demographic backgrounds to work together effectively. Consultants should not assume that heterogeneous teams are more or less effective than homogeneous teams.
6. In empirical studies of teams, the factors most associated with success depend upon who is rating the performance, and these factors may not be related to objective performance. Teams evaluate themselves most highly when they have good internal processes; managers evaluate teams most highly when they communicate sufficiently with key stakeholders outside the team. Consultants might focus on different factors, depending upon who their client is for a team intervention.
7. Task conflict benefits performance, while affective conflict detracts from performance. Similarly, task cohesion contributes to the quality of team decisions, while interpersonal cohesion diminishes their quality. Consultants should encourage task-based conflict in teams, so that they consider multiple ideas, weigh alternatives, and develop the best solutions. Consultants should also help groups obtain agreement about the nature of their tasks to be performed, the methods to be used, and the level of

performance to be achieved. In contrast, they should help teams avoid or immediately resolve relationship-based conflict, and the focus of their activities should not be on building close relationships among team members.

Consultants should be skeptical of exaggerated performance claims made by the popular press or by practitioners with specific products to sell. The empirical research on teams suggests that there are no quick fixes or panaceas for developing effective teams. The findings strongly imply that to be successful, consultants must have a relatively sophisticated understanding of teams that takes into account the multiple types of teams in use today. Consultants need to tailor their interventions to fit the different types of teams.. They must go beyond teambuilding by taking a comprehensive approach to designing effective teams.

At the same time, consultants should realize that practice often precedes the empirical research that can evaluate its efficacy. They may be providing support to organizations and teams in areas which have not been studied sufficiently to guide practice. For example, consultants are already helping organizations design and support virtual teams. They help team leaders and business leaders shape their activities to better support teams. They work with teams at various stages of development. Consultants need to be reflective about their experiences so that they can learn from them. They also should demand that empirical researchers catch up and do studies useful for practice. Our knowledge of teams and our methods for working with them have advanced in the 1990s. But to paraphrase Bettenhausen (1991), the best is yet to come. We look forward to the journey.

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